Fortress



French Fortresses in North America 1535–1763

Québec, Montréal, Louisbourg and New Orleans

René Chartrand • Illustrated by Donato Spedaliere

First published in 2005 by Osprey Publishing
Midland House, West Way, Botley, Oxford OX2 0PH, UK
443 Park Avenue South, New York, NY 10016, USA
Email: info@ospreypublishing.com

ISBN 1 84176 714 X

Editorial: Ilios Publishing, Oxford, UK (www.iliospublishing.com)
Design: Ken Vail Graphic Design, Cambridge, UK
Index by David Worthington
Maps by The Map Studio Ltd
Originated by The Electronic Page Company, Cwmbran, UK
Printed and bound in China by L Rex Printing Company Ltd.

05 06 07 08 09 10 9 8 7 6 5 4 3 2 1

A CIP catalog record for this book is available from the British Library.

For a catalog of all books published by Osprey Military and Aviation please contact:

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Acknowledgments

The author is grateful to his many colleagues at Parks Canada, notably those at Fortress Louisbourg, the Fortifications of Québec and at the national HQ in Ottawa. Also Claire Mousseau, chief archaeologist of the City of Montréal, the staff of the National Archives and Library of Canada and of the Archives Nationales in France.

Artist's note

Our sincere thanks to all who have helped in the preparation of this book. We would like to dedicate this book to our dearest daughter Alina.
Readers may care to note that the original paintings from which the colour plates in this book were prepared are available for private sale. All reproduction copyright whatsoever is retained by the Publishers. All enquiries should be addressed to:

Sarah Sulemsohn
Tel-Fax: 00 39 0575 692210
info@alinaillustrazioni.com
alina@alinaillustrazioni.com
www.alinaillustrazioni.com

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Author's Note

"In the new colonies, the Spanish start by building a church, the English a tavern and the French a fort." There was some truth in this tongue-in-cheek remark by the great French author René de Chateaubriand (1768–1848); New France eventually had a North American network of numerous forts, big and small, extending from the Gulf of St. Lawrence to the Gulf of Mexico and west into the present-day Canadian and American prairies. There were also fortresses, the subject of this study, as the main towns were fortified. Fortresses such as Louisbourg and Québec have been rightly famed for their extensive fortifications, Québec having the advantage of a formidable natural site. However, few people today would guess that Montréal and New Orleans could also be termed fortresses, for they were once enclosed by bastioned walls and moats. Although their fortifications were relatively modest and meant to deter raiders rather than fully fledged armies, both cities were surrounded by numerous outlying forts. These provided early warning and acted as an outer buffer, a feature peculiar to the fortress cities situated at the hub of great North American rivers.

Measures

These have varied over the centuries and varied from one nation to another. In New France, weights and measures were those used by the mother country. It is most important to note that the French foot, used in New France, was longer (12.789 inches) than the British foot (12 inches). The official French measures from 1668 to 1840 were:

2 miles = 1 Lieue = 3.898 kilometers
1,000 Toises = 1 mile = 1.949 kilometers
(British = 1.61 kilometers)
6 feet = 1 Toise = 1.949 meters
(British Fathom = 1.83 meters)
12 inches = 1 foot = 32.484 centimeters
(British = 30.48 centimeters)
12 lines = 1 inch = 2.707 centimeters
(British = 2.54 centimeters)

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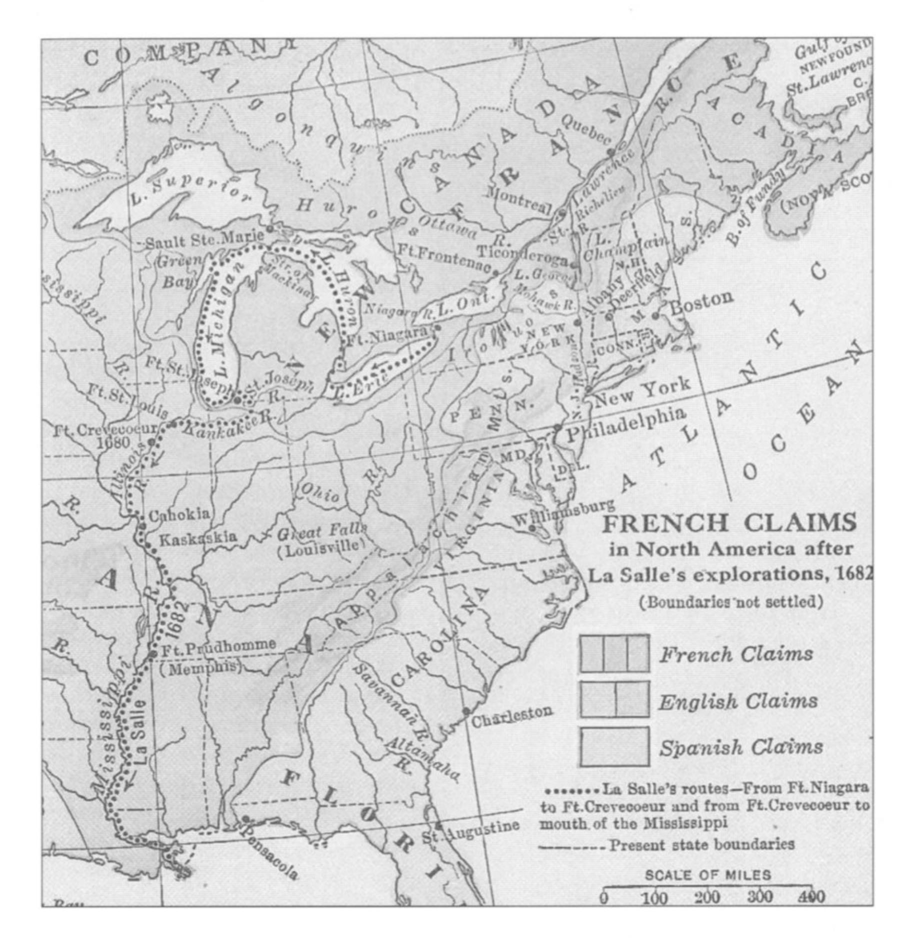
Following the discovery of America by Columbus in 1492, European colonists built their style of fortification in the New World in an attempt to ensure their safety and consolidate their conquests. The Spanish and Portuguese were the first to build sizeable forts, some of which evolved into fortified towns—fortresses—as their settlements grew. San Juan (Puerto Rico), Havana (Cuba), Cartagena de Indias (Colombia) and several others in the "Spanish Main" and South America were already renowned by the 17th century. The French and the British came later to North America and thus the establishment of their sizeable permanent settlements only got under way during the 17th century. The British colonists rapidly outgrew their small stockaded settlements along the North American coastline but did not build elaborate fortifications to protect their towns. Their French neighbors did.

From the early 17th century until the end of the Seven Years War in 1763, the greater part of North America came under the French realm and much of it was called *La Nouvelle-France* (New France). Thanks to relentless explorers and traders, the land mass of New France was enormous, extending from the Gulf of St. Lawrence to the Rocky Mountains in the west and from the Great Lakes to the Gulf of Mexico in the south. But as impressive as it may have looked on a map, New France remained a weak colony in terms of population, which was sparse and scattered. It had only about 500 French inhabitants in 1641, some 14,000 in 1689 and perhaps 80,000 of French origin by the 1750s.

In the early 17th century, New France was divided into two administrative entities. The largest and most important was the colony of Canada, which included the settled areas in the St. Lawrence Valley with the three towns of Montréal, Trois-Rivières and Québec. It also extended into the western wilderness as far as it had been explored, an ongoing process. On the Atlantic seaboard was the small colony of Acadia whose settlements were spread in parts of present-day Nova Scotia, New Brunswick and Maine. On the island of Newfoundland was the port of Placentia that formed a small colony. Following the cession of Acadia and Placentia to Britain by the Treaty of Utrecht in 1713, the garrisons and some of the settlers were moved to Cape Breton Island, subsequently renamed Isle Royale, where, from 1720, the fortress of Louisbourg was built.

Further south, the French had reached the Gulf of Mexico in 1682 by coming down the Mississippi River and, from 1699, settlements were established on the coast to make up the third entity, the colony of Louisiana, in the present-day states of Alabama, Mississippi and Louisiana. Today a relatively small American state, Louisiana in the 18th century covered an enormous territory extending from Canada to the Gulf of Mexico. Louisiana's population was modest and its settlements were concentrated on the Gulf Coast and in Les Illinois (also called Upper Louisiana), in the general area of present-day St. Louis.

The government of New France was patterned after that of a French province. The governor-general of New France, who resided in Québec, had overall authority and was commander-in-chief. He was assisted by the intendant in financial and civic matters and the bishop in religious issues, their respective powers being devolved to local governors, commissaries and senior priests. In Canada, there were local governors in Montréal and Québec. Isle Royale's governor was in Louisbourg and Louisiana's governor was in New Orleans. Although nominally subordinate to the governor-general in Québec,



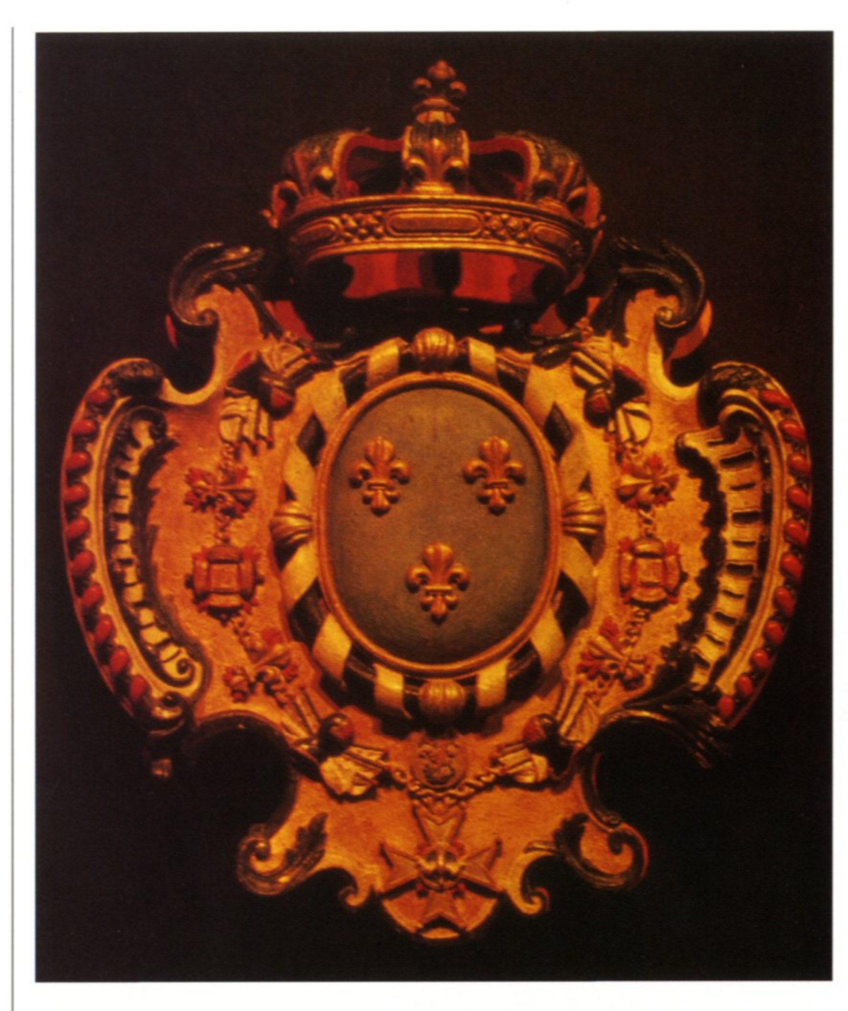
Detail of a map of French claims to North America following Robert Cavelier de La Salle's explorations (dotted line) from Canada to the Gulf of Mexico. It formed a great arc enclosing the British coastal colonies. Starting in the northeast (top right corner) with Cape Breton Island, where Fortress Louisbourg was built from 1720, it extended west along the St. Lawrence River, passing the fortresses of Québec and Montréal and continuing to the Great Lakes; then south on the Mississippi River to the Gulf of Mexico where New Orleans, also eventually enclosed by walls, would be built. The forts shown along the Mississippi River were mostly the early ones built by La Salle.

the governors of Isle Royale and Louisiana were independent as they reported directly to the minister responsible for naval and colonial affairs in Versailles. Canada, the Atlantic seaboard colonies and Louisiana each had their respective garrisons of colonial troops.

The fortresses of New France studied in this book—that is to say, substantial towns and cities enclosed by protective walls—were extraordinary in their variety. (The term *place forte* rather than *forteresse* was generally used by the French to denote a town surrounded by fortifications until the 1870s.) Québec was a formidable natural fortress; the defenses of Louisbourg were almost transposed from Vauban's textbooks; Montréal had a substantial wall and New Orleans was eventually also protected by moats and redoubts. Although quite different in fortification style and extent, Québec, Montréal, Louisbourg and New Orleans all had one thing in common: their strategic importance was tremendous and the fall of any one of them practically ensured the fall of their entire area.

Except for New Orleans, all were besieged during the 17th and 18th centuries. Québec resisted in 1690 but fell in 1759; its henceforth British garrison would resist in 1760, and again (against the Americans) in 1775–76. Louisbourg fell twice, in 1745 and 1758, after great sieges. Montréal held the last French army in Canada when it surrendered to three British armies in September 1760. Only New Orleans escaped being besieged although treaties signed in Europe passed it from France to Spain in 1763, to France again in 1802 and finally to the United States of America in 1803.

One town that never quite made it as a fortress was Trois-Rivières, although it was enclosed by a palisade wall. Founded in 1634, it quickly lost its strategic and economic importance after Montréal was settled in 1642. As will be seen



The Coat of Arms of France, c.1725–60. Traditionally, the royal coat of arms was put up above the gates of fortifications. In New France, this was not always the case and, according to Chief Engineer Chaussegros de Léry, they were nowhere to be seen "in this colony." In 1725, he had royal coats of arms made and put up at all government buildings, forts, gates, courtrooms and jails; and all new government buildings would have them henceforth (AC, C11A, 47). This particular example was once displayed over the gates of Québec and may have been the work of Pierre-Noël Levasseur. It is now in the Canadian War Museum in Ottawa. A similar example is at the Musée de la Civilisation in Québec. (Author's photograph)

later, its meager defenses had become useless by the middle of the 18th century.

Each major town was capital to an area. Québec was simultaneously the capital of New France, the colony of Canada and the district of Québec. Trois-Rivières and Montréal were respectively the capitals of their districts of Trois-Rivières and Montréal. Louisbourg was the capital of the colony of Isle Royale (Cape Breton Island) and New Orleans was the capital of Louisiana.

Within the French colonial administrative system, these towns—Québec, Trois-Rivières, Montréal, Louisbourg and New Orleans—were the seats of governors and their retinues of garrison staff officers. Principal among these were the *Lieutenant du Roi* (King's Lieutenant, in effect the lieutenant governor), the *Major de Place* (Town Major, often assisted by an assistant major) and, in major cities, a *Capitaine des Portes* (Captain of the Gates, a medieval title to denote the officer in charge of security). In the case of Québec, the governor-general of New France resided there and was also the town's governor. His prestige was of the highest order and some of the honor due to him equaled that of marshals in France. Drum rolls greeted him when he came into or out of his château; he was allowed an escort of his own guards; he enjoyed cannon salutes when arriving in towns and he would be addressed as *Monseigneur* (My Lord). He had a staff of several officers including the senior *Ingénieur du Roi* (King's Engineer) in the colony and the captain of his guards acted as an aide-de-camp.

Next in line to the governor-general was the intendant, the most important civil official, who also resided in Québec City. By protocol a subordinate to the governor-general, the intendant was his equal regarding financial management (including military budgets), legal matters and commerce, all of which were his responsibility. His subalterns, the *Commissaire-ordonnateur*, were to be found in all fortress towns except Trois-Rivières. The intendant and a colony's *Commissaire-ordonnateur* ranked as high civil officials and enjoyed an escort of an *Archer* (police constable) on formal occasions.

Chronology

1534	Explorer Jacques Cartier takes possession of Canada for France. The area is named New France.
1535	Cartier and his men build a small fort in the area of Québec.
1541–43	Cartier and the Sieur de Roberval build several forts in the Québec area, but the colony is abandoned in 1543.
1608	Samuel de Champlain, explorer and first governor-general of New France, founds Québec and has the first of several forts built.
1620	Fort built on Cape Diamond at Québec. It eventually becomes the residence of the governor-general of New France.
1642	Montréal, originally called Ville-Marie, is founded.
1682	Explorer Robert Cavelier de La Salle descends the Mississippi River to the Gulf of Mexico, takes possession of the Mississippi Valley for France and names it Louisiana.
1660s–90s	String of outlying forts built in the Montréal area.
1687–89	Palisade built around Montréal.
1690	Québec is enclosed by a stockade with small bastions. A New England fleet and soldiers, led by Sir William Phips, are repulsed after a short siege in October.
1693	Ramparts with large bastions replace the stockade at Québec. Several inconclusive attempts to make better ramparts in following decades.
1699	First permanent French settlements established in Louisiana.
1717	Work commences on reveted rampart to enclose Montréal. The work goes on until 1744.
1720	Foundation stone is laid at Louisbourg and extensive fortifications are built there until 1743.
1722	New Orleans becomes the capital of Louisiana.
1730	Work commences on rampart at New Orleans, but it is left unfinished.
1745	Louisbourg falls to a New England army. Reveted walls are built to enclose the landward side of Québec.
1749	Louisbourg is returned to the French.
1758	Louisbourg falls to British army and fleet; its fortifications are blown up two years later and the remnants of the town are abandoned in the late 1760s.
1759	Fortifications of Québec are improved, notably artillery batteries and a series of redoubts built on the Beauport shore area up to the Montmorency River. After a summer-long siege by British forces and the French army's defeat on the Plains of Abraham, the city surrenders.
1760	French siege to retake Québec fails. Last French army in Canada surrenders at Montréal in September.
1760–61	Fortifications enclosing New Orleans are built and completed.
1763	Treaty of Paris: France cedes Canada, Isle Royale and Louisiana on east side of the Mississippi River to Britain; the rest of Louisiana is ceded to Spain.

The King's Engineers

The theoretical education of French engineers in the age of Louis XIV (1643–1715) and Louis XV (1715–74) was remarkably good by the standards of the day and covered aspects of engineering, tactics, architecture, fine arts and town planning. Geometry was the main element of European military architecture since the end of the Middle Ages and the introduction of artillery in siege warfare. The large castles with high walls and turrets were obsolete as they could be demolished by cannonballs. New ways had to be found to protect strongholds; obviously, the walls and towers would have to be lower and wider, made of stone frames filled with earth, so as to accommodate artillery for the defenders while making it much more difficult for the besieger to breech the walls. By the 1480s, Italian military engineers had conceived the corner bastion that became, quite literally, the cornerstone of fortifications for centuries to come. Renaissance engineers in Italy published a multitude of geometric designs with bastions and moats at all angles to enclose a city with fortifications as well as laying out city streets and squares in an orderly fashion. Some were fanciful but, on the whole, they offered effective ways to defend a city in a European military context. From the late 16th century and during the 17th century, major wars were often fought in mostly flat terrain of Flanders where geometric designs could be built almost flawlessly. The Dutch engineers now became leaders in military architecture, devising enormous earthworks that were surrounded by large water-filled moats thanks to the high water table of that area. Menno van Coehorn (1641–1704) was the leading Dutch engineer whose intricate fortification designs and the use of water as an obstacle were much admired.

The French were also keenly interested in fortifications and had, since the Renaissance, applied the "Italian tracing" to their fortress designs while adding features of their own. The French approach was more systematic than elsewhere and, as early as 1604, a nationwide administrative regulation concerning fortifications was put in place. This brought an increasing professionalization of military engineering, which coincided with the advent of Sébastien Le Preste de Vauban (1633–1707), one of the greatest engineers in military history. Part of Vauban's remarkable success was due to his pragmatic approach; he was not merely a theoretician with skills in geometry, he was also a veteran military engineer in the field who conducted some 48 sieges during his career. Vauban's elaborate systems of fortifications thus combined and enhanced designs proven effective in actual siege warfare, hence their renown. Louis XIV, recognizing Vauban's great talent, made him national superintendent of fortifications and tasked him with building or repairing a multitude of forts and fortresses all over France, but especially in Flanders, where the king wanted a line of fortresses built to prevent enemy incursions. This vast public works project, which went on for decades, required numbers of qualified engineers. Previously, more or less gifted amateurs had been somewhat self-proclaimed "engineers" who largely acquired their knowledge from engineering books published mostly in Italy and in Holland. Louis XIV felt that military engineering was a state secret and that Vauban's manuals on fortifications, on the ways to attack and defend fortresses should not be published. Thus, those selected to be military engineers had no printed manuals from Vauban; instead part of their training was to make a manuscript copy of Vauban's treatises, which they would keep as their main reference work afterwards.

In France, the men responsible for designing and building fortifications were the "King's Engineers" (*Ingénieurs du Roi*). These were highly skilled and educated individuals who held royal commissions—hence being called the "King's"—to practice their art in government service. They combined the present-day skills of architecture, military and civil engineering, and urban planning. While primarily concerned with fortifications, they could also be called upon to design churches, windmills, warehouses, etc. The King's Engineers also had military officers' commissions to provide them with a rank, usually that of captain, within the military structure. They were employed as staff officers and would also be found in the entourage of a colonial governor or governor-general.

Under Marshal Vauban's leadership, the King's Engineers formed a sort of small independent ministry whose staff was spread all over France and its colonies. This state of affairs continued following Vauban's death. The Marquis d'Asfeld, his successor, was a skilled soldier and courtier who, during his lifetime, managed to keep the engineers from being amalgamated. In 1732, he introduced a colorful uniform for the King's Engineers consisting of a scarlet coat with blue cuffs, scarlet waistcoat and breeches, gilt buttons set in pairs, a dress that certainly distinguished them from most officers in the armed forces.

In March 1743, the Marquis d'Asfeld passed away and the engineers' independence came to an end. Most were absorbed into the army in France with others going to the navy. As the navy was responsible for the colonies in America, there were hardly any changes for the engineers posted to the various towns who continued to be called the King's Engineers and wear their scarlet uniforms. From the time of the Seven Years War, metropolitan army engineers were sent to Canada and other colonies and served mostly in the field as with Montcalm's army. The colonial King's Engineers continued to be mostly preoccupied by fortifications, sometimes quite far into the wilderness interior of the continent.

Engineers were active in Canada from the early decades of the 17th century, most notably Jacques Bourdon, who was active in Québec from 1634 to 1668. A regular establishment of engineers under a chief engineer was set up in the late 17th century. Robert de Villeneuve first had the post from 1685 to 1693. Jacques Levasseur de Néré was named to succeed him but only arrived from France in 1694. In the meantime, Captain Josué Berthelot de Beaucours, an infantry officer with engineering talent, had filled in and supervised the construction of Québec's first line of ramparts. Both engineers were kept busy in the next decades with de Beaucours succeeding Levasseur de Néré as chief engineer of Canada in 1712 until transferred to Louisbourg in 1715. Two sub-engineers had been added from 1712. Gaspard Chaussegros de Léry arrived in 1716 to fill the post of chief engineer, which he had until his death in 1756. He was succeeded by Nicolas Sarrebrousse de Pontleroy.

The first chief engineer in Isle Royale was Jacques de Lhermitte, who was succeeded by de Beaucours in 1715. However, Joseph-François du Verger de Verville drafted the initial plans of the new fortress, followed by Étienne Verrier, chief engineer at Louisbourg from 1725 to 1745. Louis Franquet took on the post in 1750 as well as that of Inspector of Fortifications in Canada (which was done in 1752–53); he was an experienced engineer with the rank of colonel in 1751 and brigadier in 1754, the highest ranking engineer in New France. He served in Louisbourg until the fortress fell in 1758.

The early engineers in Louisiana were Paul de Perrier, Pinel de Boispinel, Jacques Le Blond de La Tour and Adrien de Paugé who all arrived in 1718 sponsored by the "Occident" monopoly company that then ruled the colony. In 1731, the French crown took over the administration and Broutin became Chief Engineer in Louisiana. He designed the first fortifications for New Orleans in the early 1730s but it was only in 1760 that the city was finally enclosed by a rampart laid out by Chief Engineer Vergès.



An *Ingénieur du Roi* (King's Engineer) c.1740. They were assigned a uniform from February 25, 1732, consisting of a scarlet coat with scarlet lining, waistcoat, breeches and stockings, blue cuffs, gold buttons (four set in pairs on cuffs), gold hat lace and, initially, a white plume border (not mentioned from the later 1730s onward). Colonial engineers continued to wear this uniform until the end of the Seven Years War in 1763. (Reconstruction by Michel Pétard; Parks Canada)

A French military engineer landing in New France came with an education suitable for siege warfare in Europe. He was now faced with a "New World" offering very different strategic and geographic conditions into which he simply had to adapt. A good example was Chief Engineer Chaussegros de Léry. A veteran of European campaigns during the War of the Spanish Succession, he landed at Québec in 1716 with a complete knowledge of Vauban's system and, in his baggage, his own multi-volume manuscript treatise on fortifications and architecture. This remarkable work, which has survived the ravages of time and is now preserved in the National Archives of Canada, shows the considerable extent of knowledge a senior military engineer would have arriving in a colonial setting. In a site such as Louisbourg, local topography allowed an engineer such as Verrier the building of Vauban-style fortifications. But in Canada, as de Léry quickly perceived, many elements rendered Vauban's system questionable. Distance and a sparse population meant that military forces would move by water rather than by land and that manpower to build enormous bastions and glacis was not available. Thus, his first major work, the design to enclose Montréal with a reveted rampart, was a radical departure from the ideal star-shaped fortress in Flanders and resembled far more an early 17th-century fortress without the extensive outworks. De Léry's plans to enclose the landward sides of Québec were in the typical Vauban style and built from 1745. The planned moats and glacis were only completed facing the Saint-Jean Bastion, no doubt due to labor and money shortages and perhaps to doubts as to the pertinence of having such works on the heights of Cape Diamond. On the other hand, New Orleans had the flat terrain and high water table ideal for a city surrounded by water-filled moats and large bastions. But, as Chief Engineer Broutin soon found, he was not dealing with calm waters as in Flanders but with the mighty Mississippi River and its tons of silt that might wash fortifications away and fill moats with silt. And New Orleans did not have sufficient labor to build such large works in the first place, although a good solution to the city's defenses was eventually put up by Engineer de Vergès.

Besides fortresses, as plans in the archives and remaining vestiges show, French engineers in North America had to alter their notion of what an outlying stone fort should be like. From the 17th until the mid-18th century, the main threat came from enemy Indian raids. Thus, stone forts more reminiscent of small medieval castles (see pages 38–39) were built near Montréal and also at Chambly and, as a huge tower, at Saint-Frédéric (Crown Point, NY). Thereafter, with an Anglo-American enemy looming, the more usual square plan with bastions, already common in wooden forts, was used for stone-walled strongholds such as Fort de Chartres (Illinois) and Fort Carillon (Ticonderoga, NY).

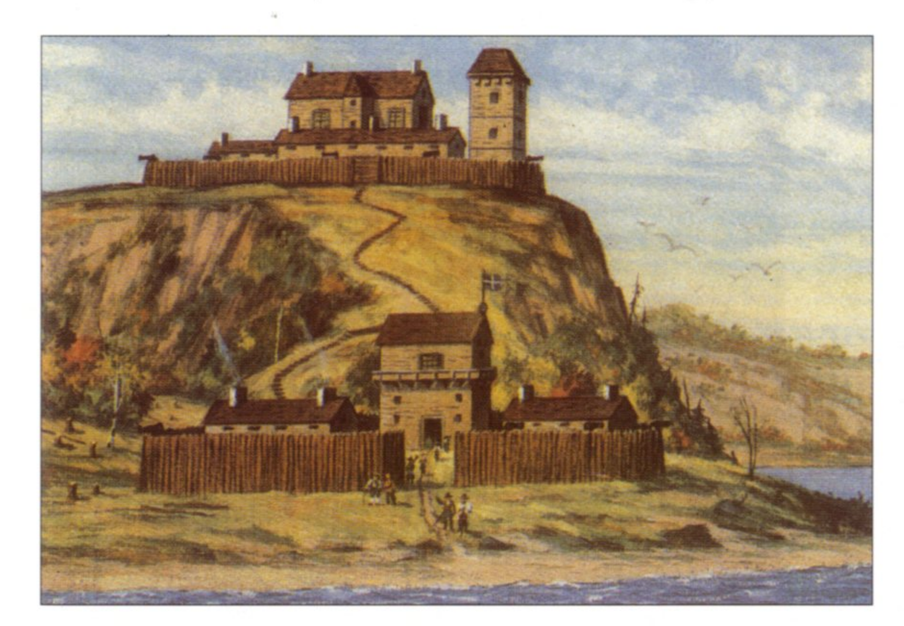
Québec

The mightiest site on the continent

The most formidable fortress in North America was the city of Québec. An Indian town was already there when, in 1535, French explorer Jacques Cartier arrived and named its imposing 300-foot cliff Cap Diamant (Cape Diamond). Cartier and his men decided to pass the winter in Canada. They feared "betrayal" on the part of the Indians and so they built a small fort "entirely enclosed with large pieces of wood standing on end" that was mounted "with artillery all around it." They reinforced it externally "with large moats, wide and deep, and a drawbridge gate." It was the first fort built in Canada, but the French abandoned it the following year.

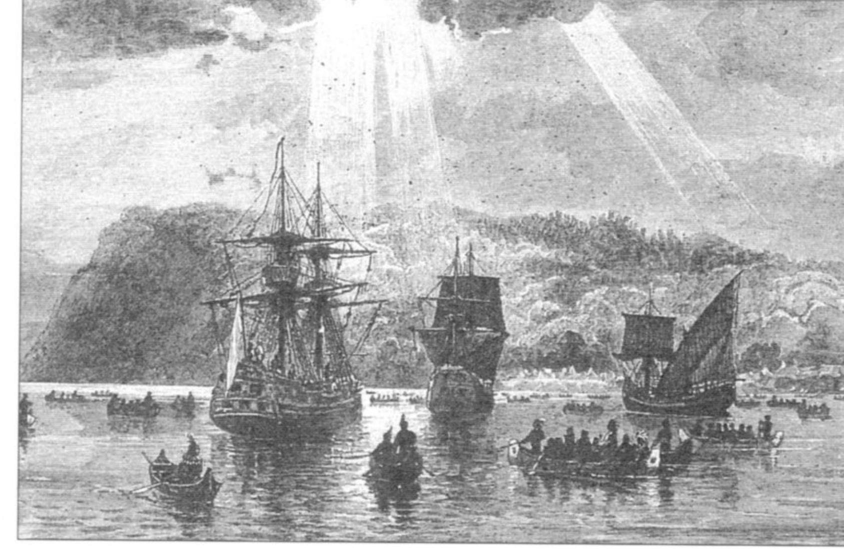
In 1541, Cartier was back, leading a larger expedition. This time, two small forts were built, one at the foot of Cap Rouge (west of Cape Diamond) and the other, certainly smaller, on top of the cliff. Once again, however, the French left the area in the spring of 1542 after some fighting with Indians. Later that year, another French expedition led by the Sieur de Roberval arrived in the area and built a fort on the summit of Cap Rouge that was described as being "very strong" with "a large tower" and a main building inside. Another fort was built at the foot of Cap Rouge and featured "a two-storey tower, with two good main buildings." The new settlement was baptized France-Roy. During the winter of 1542–43, scurvy took the lives of a quarter of the French colonists. With his colony decimated and no gold found, Roberval gave up, and everyone went back to France in 1543. Sixty-five years were to pass before another settlement attempt was made.

On July 3, 1608, another French expedition under Samuel de Champlain landed at Québec and began the construction of a "Habitation" at the foot of Cape Diamond, on the site of the present-day city's lower town. Thus began the first permanent settlement in New France. Initially, it was a trading post, but missionaries and settlers joined the traders in the following years while the

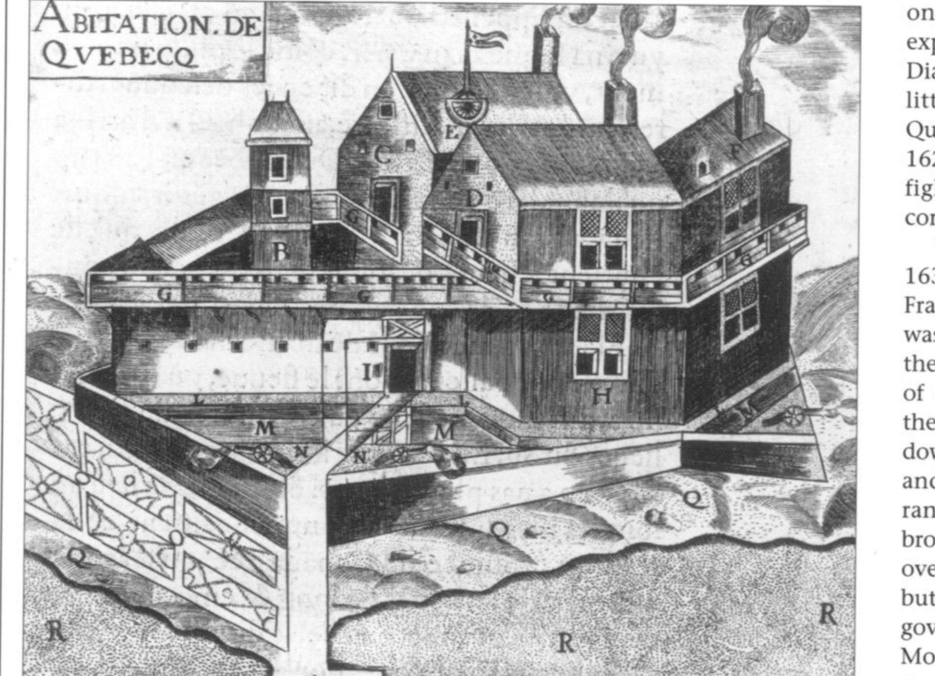


The forts of France-Roy (at the present-day Cap Rouge, just west of Québec), built by Roberval and his men in 1542. One fort was near the shore at the estuary of the St. Lawrence River and the small Cap-Rouge River; the other was at the top of the height just behind. The settlement was abandoned in 1543. (National Film Board of Canada)

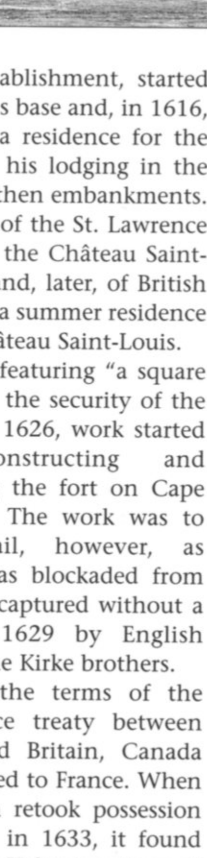
Ships before Cape Diamond in the early 17th century. Samuel de Champlain chose the magnificent site, called Québec by the Indians, in 1608 as the place at which to establish the first settlement in what would become Canada. (Author's photograph)



The "Habitation" was the first fort built by the French at Québec from July 1608. It featured high vertical walls, a ditch and platforms for artillery outside the castle-like structure. The structure was enlarged in 1616. (Print after Samuel de Champlain; National Library of Canada, L8769)



adventurous Champlain, also governor of the small establishment, started exploring the interior of the vast continent. Québec was his base and, in 1616, the Habitation was enlarged. In 1620, a new fort with a residence for the governor was built on top of Cape Diamond to replace his lodging in the decaying Habitation. This fort was built of timber with earthen embankments. The exceptional site of the fort gave a commanding view of the St. Lawrence River. In time the governor's residence grew and became the Château Saint-Louis, residence of the governor-generals of New France and, later, of British North America. Today, the governor-general of Canada has a summer residence in the citadel, not very far from the site of the original Château Saint-Louis.



Between 1624 and 1626, a new and larger Habitation featuring "a square wall with two little towers on the corners" was built "for the security of the place." In 1626, work started on reconstructing and expanding the fort on Cape Diamond. The work was to little avail, however, as Québec was blockaded from 1628 and captured without a fight in 1629 by English corsairs, the Kirke brothers.

Under the terms of the 1632 peace treaty between France and Britain, Canada was returned to France. When the French retook possession of Québec in 1633, it found the second Habitation burned down, and the fort on the cape and other public buildings ransacked by the Kirke brothers. Repairs were made over the next couple of years but, in 1636, the new governor, Jacques Huault de Montmagny, had major improvements made to the fort on Cape Diamond; a parade ground and the first streets, named Saint-Louis, Sainte-Anne and Mont-Carmel, leading to the fort were laid out. In 1646–47, the fort and its château were rebuilt in stone.

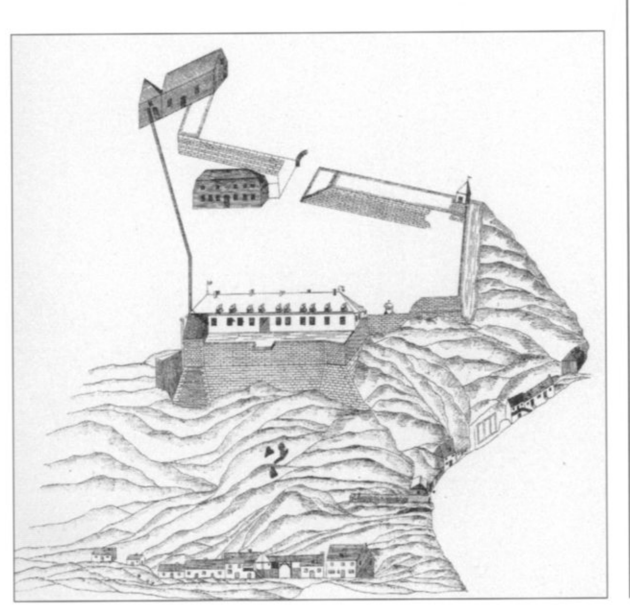


The second "Habitation" was built in 1624–26 and replaced the first one built in 1608. Situated at the foot of Cape Diamond, it was larger and featured two medieval-looking stone turrets at the corners of a large stone building enclosed by a wooden wall. At the time, Québec was primarily a fortified trading post. (Model at the Centre d'Interprétation de la Place Royale, Québec; Author's photograph)

As imposing as its site was, for many years Québec had practically no fortifications other than the Château Saint-Louis and its fort perched on Cape Diamond. It was impressive nonetheless, as indeed it still is today. In 1672, Governor-General Louis de Buade, Comte de Frontenac, wrote to Jean-Baptiste Colbert, Louis XIVs powerful minister of trade and the navy, that "nothing has seemed to me so beautiful and magnificent as the site of the city of Québec, it cannot be better situated, and is destined to one day become the capital of a great empire." These were prophetic words as the "great empire" was in the process of being discovered by explorers such as Marquette and La Salle who were exploring the Mississippi Valley.

Québec remained an open city until 1690. During the spring of that year, the fall of Port Royal in Acadia to a naval and military force from Massachusetts under Sir William Phips fueled concerns that Québec City would be the next target. Should a hostile force land, the whole landward side of the city to the north and west had no defenses at all and was totally exposed. An attack from those areas, and particularly from the flat western side known as the Plains of Abraham, would catch the defenders in the city from the rear. Nothing much could be done from the fort enclosing the Château Saint-Louis to prevent such an attack by a well-organized enemy. Governor-General Frontenac, who had just returned to Canada for a second term, immediately ordered that a wooden palisade be erected to enclose the city. This first wall, which featured 11 small stone redoubts, was sufficient to avoid any nasty surprises and gave a measure of protection against a force lacking siege artillery. Built under the direction of Town Major Provost, it extended from the château to the St. Charles River. The likelihood of an enemy getting its heavy siege guns on that side was correctly thought to be most unlikely. Besides the wall, a number of batteries were built and the existing batteries were

The Château Saint-Louis and its fort at Québec in 1683. The walls of the fort on Cap Diamant (Cape Diamond) were built from 1636 and stood until torn down in 1693. This first Château Saint-Louis was built in 1647. This was where, in 1690, Sir William Phips' messenger delivered the summons to surrender and received Count Frontenac's celebrated reply that he would answer with his cannons' muzzles. During the 1690 siege, the fort acted as the citadel of Québec's fortifications. The château was demolished in 1692 in order to build a larger one. The houses on the right side border the narrow way (now Petit-Champlain Street) down to the lower town. (Print after Jean-Baptiste Franquelin)



Québec , 1690

In 1690, the city of Québec did not have extensive fortifications. Instead it relied on the great strengths offered by its location. Not only did the city have outstanding and very visible cliffs and Cape Diamond, but also its whole eastern shore heading toward the St. Charles River to the north was very shallow and could not be approached by ships. The town's main man-made defenses consisted of batteries set up in both the lower town and upon the cliff, and a palisade to protect the landward side. Within the city, various temporary obstacles had also been erected, notably at the street leading to the upper town.

In the upper town, just west of the fort (1) and the Château Saint-Louis, residence of the governor-general, was an eight-gun battery (2). East of the Château Saint-Louis, at the turn of the cliff toward the north, was a three-gun battery (3).

On the shore of the lower town, at the site of the future Royal Battery, was a platform with three 18-pounder guns (4). Further east on the waterfront was another battery with three 18-pounder guns (5). Heading north, at the limit of the town near the intendant's palace, was another three-gun battery at water level (6). This area also had a large contingent of troops and, beyond, the west shore of the St. Charles River had been strenghened with field fortifications (not shown).

The landward side was enclosed by a palisade built shortly before the siege (7). It started west of the battery near the Château Saint-Louis and ended on the eastern side not very far from the hospital. This log wall featured 11 stone "redoubts" that seem to have been square towers. On the west side, facing the Plains of Abraham, was a windmill called Mont-Carmel where a three-gun battery was established to provide a strong point for the palisade line on the landward side (8). There may also have been individual guns at other locations all over the city. Other important sites in the city included the Bishop's palace (9), Québec Seminary (10), Jesuit's College and residence (11), Hospital (12), Ursuline Sisters College and residence (13), Saint-Louis Gate (14) and Saint-Jean Gate (15).



This bust of Louis XIV by Bernini was unveiled in 1686 at the Place Royale in Québec's lower town. Later removed and lost, another casting of the bust was installed when the area was renovated in the 1960s and 1970s; a fitting reminder of the "Sun King" whose policies fostered France's influence in North America. (Author's photograph)

improved. A battery of eight guns was erected next to the château and two more were built at the docks in the lower town, each having three 18-pounder cannons. Other batteries were sited at various points overlooking the river. All these batteries were meant to cover any enemy ship that got too close to the city.

The 1690 siege

While Québec did not have a real citadel, the construction of all these batteries sited on the finest spots of the city's commanding cape made it a difficult place for enemy ships to attack. On October 16, 1690, some 34 ships flying English ensigns came into view with 2,300 men on board. It was Sir William Phips, heading an expedition of New Englanders out to conquer New France. The colony of Massachusetts had sponsored the whole scheme and financed it by

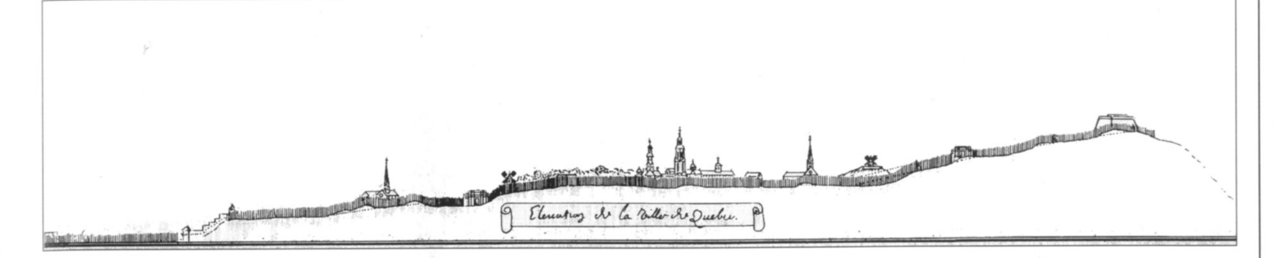


The 1690 defense of Québec. This 19th-century print shows the city as it would have appeared in the early 1700s rather than 1690, notably the Château Saint-Louis as rebuilt from 1692. Nevertheless, it gives an excellent sense of the commanding sites available to the French batteries on Cape Diamond when pitted against Sir William Phips' ships on the St. Lawrence River. (National Archives of Canada, C6022)

issuing paper bonds set against the value of the booty that would be taken in the conquered colony. As his fleet came into view of Québec, Sir William and his senior officers realized that their objective was sited on the strongest natural position they likely had ever seen. Up in the château on Cape Diamond was Governor-General Frontenac, a crusty old soldier from ancient nobility, proud and temperamental, an experienced officer and shrewd man of action. He was looking forward to the coming fight.

Up to that point, Phips and his New Englanders were quite confident that the cowardly and effete French would be no match for their hardy men and the city was expected to surrender immediately. Phips wrote up a fairly curt summons with instruction to the French commander that he had one hour to comply. An officer was at once sent to the city to present the summons. He was blindfolded and brought to the Château Saint-Louis. There, the fiery Governor-General Frontenac, with many of his officers in their best dress, listened to the summons. The New Englander then pulled out his watch. That was too much for Frontenac. He was so enraged that he wanted to have the messenger hanged at once in full view of the Massachusetts fleet! Calmed by the bishop and the intendant, he answered the summons with a line that has since become famous in Canadian history: "Tell your master I will answer him by the mouth of my cannons!"

"Ataque de Québec" in 1690, showing the failed attack by Sir William Phips. The "English" ships (actually from New England) can be seen in the river (L and H). At the upper right, the Massachusetts troops have landed (M) below the village of Beauport (F) and are about to be met by French troops and Canadian militiamen (P) in the woods (O). Québec's fortifications are not shown in any detail, probably on purpose. (Print after La Hontan)



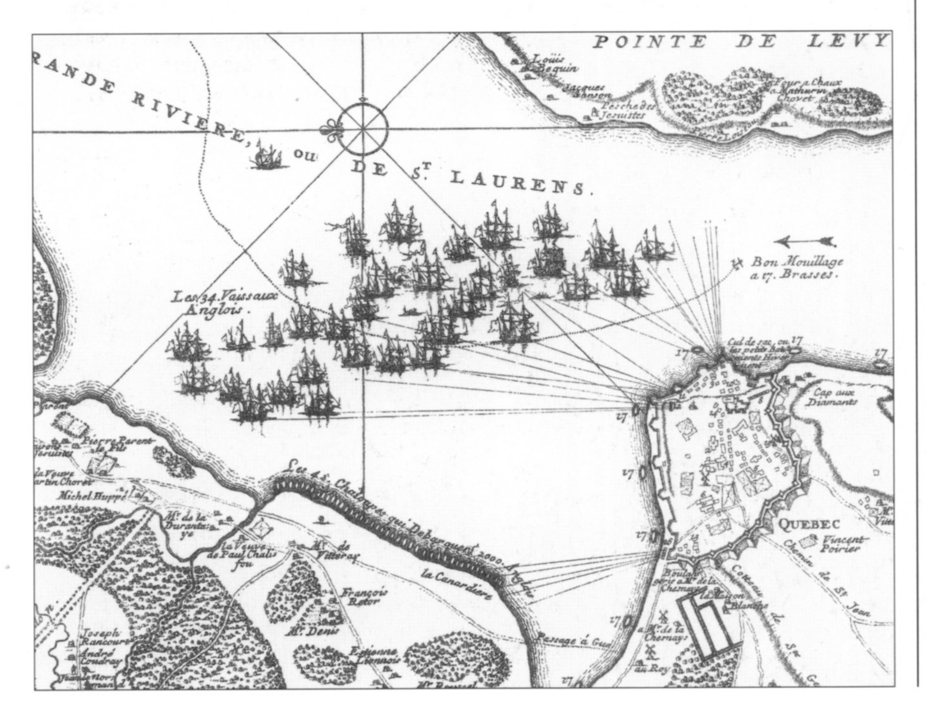
A 1690 view of Québec from the northeast. The logs of the hurriedly erected palisade helped seal the city against an attack from the landward side. (National Archives of Canada)

Governor-General Frontenac had gathered at Québec about 900 regular soldiers of the colonial troops—the *Compagnies franches de la Marine*—out of the 1,400 in New France. In addition, some 1,100 Canadian militiamen were assembled. There were also approximately 100 allied Indians. The French defending force was thus about 2,100 men.

Possibly the weakest part of the French defenses was the city's northeastern side. Phips and his senior officers saw it as the only possibility to crack French defenses, while his ships would bombard the city. On October 18, about 1,200 New Englanders landed unopposed at Beauport. Frontenac expected the New Englanders' land attack to come from that area and so the banks of the St. Charles River had been built up with field fortifications on the southwestern side. He had already sent strong detachments of Canadian militiamen along with some Indians skilled in bush warfare into the wooded areas east of the river. Meanwhile, the bigger British ships had moved closer to bombard the city. The French shore batteries proved to be more than a match; their guns pounded four of the larger ships. Rigging and hulls were badly damaged and, at length, the battered vessels withdrew. During the artillery duel, the ensign of Phips' flagship was cut down and fell into the St. Lawrence River. A few hardy Canadians jumped into a canoe and paddled for it under a hail of musket shots from the ships. Their daring paid off and they triumphantly brought the prize back into the city unscathed.

After a couple of miserable days, the New Englanders on shore decided to attack. The plan was to cross the St. Charles River, carry the shore positions, overcome the earthworks and break into the city. They set out in the best European tradition

Map detail of the 1690 siege of Québec. Sir William Phips' fleet of 34 vessels is before the city. The French battery of eight guns in the lower town was the strongest element of the city's defenses. It was rebuilt as the permanent Royal Battery the following year. Other batteries (Nos. 11, 12, 15 and 16) each had three guns, while No. 17 indicates canoes stationed as lookouts along the coast. The New England land forces disembarked from 42 longboats at la Canardière, on the Beauport shore. (Map by Nicolas de Fer, 1694; National Archives of Canada)



Québec:
The Royal Battery
This battery was situated on the waterfront of the lower town and, in spite of being relatively modest in size, was one of the most important fortifications in the city due to its strategic location. The Royal Battery's guns covered the city's dock area and a good part of the St. Lawrence River to its south shore.

After the siege of 1690, Governor-General Frontenac ordered a fully fledged shore battery to be built there. It was shaped like a small bastion and featured 14 embrasures for guns to cover both sides of the shore as well as the river. Over the years, some features changed, notably the number of embrasures for guns; they were reduced to 11 in 1695 to accommodate 24-pounder and 18-pounder cannons. This remained the case until another embrasure was eliminated between 1742 and 1755. In 1755, the battery had two 24-pounders, one 18-pounder and seven 8-pounders. This appears to have been changed the following year to four 24-pounders, two 18-pounders and four 12-pounders. Finally, sometime before the 1759 siege, ten 36-pounders were received from France and some of these heavy-caliber cannons were installed in the battery. During the siege, the Royal Battery was the scene of occasional artillery duels with British ships, but it was within range of the powerful British batteries built at Levis, on the south shore. These proved superior, especially as the low-lying Royal Battery could not return fire emanating from the Lévis cliffs. Consequently, by September 1759 it had been half-destroyed, like the rest of the lower town. After the Seven Years War (1756–63), the site of the battery was transformed into trade docks covered with warehouses. But the old battery was never quite forgotten and, in the 1970s, was restored to its mid-18th-century appearance by the Québec government.

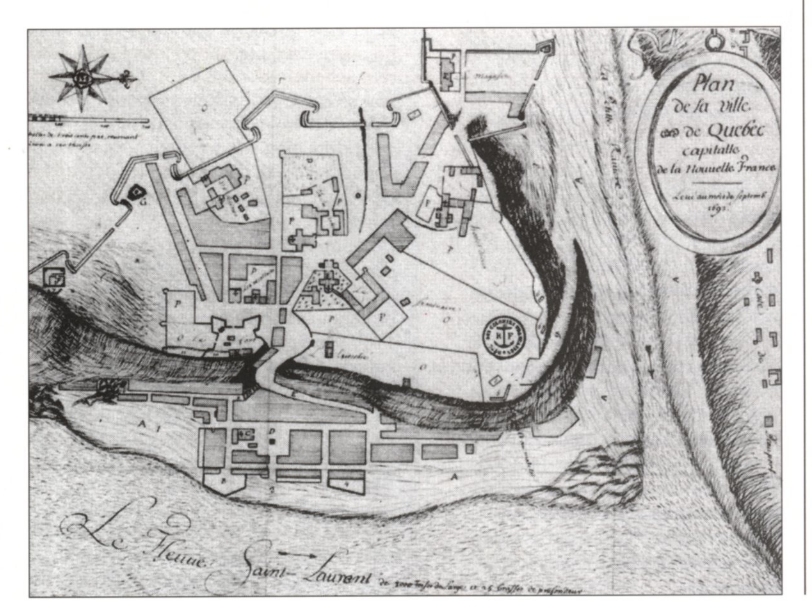
The Royal Battery was built from 1691 on the waterside of the lower town. Buried and transformed into a dock in the late 18th century, the foundations of the battery were unearthed and restored in the 1970s. In the background are the castle-like Château Frontenac Hotel and the Dufferin Terrace where the governor-generals of New France had their fortified Château Saint-Louis. (Author's photograph)

with drums beating and colors unfurled. At the edges of the woods, plenty of Canadian militiamen were waiting for them. The New England militiamen could not cope with their heavy fire, wavered and fell back. Brass field guns were brought up and fired into the woods, but to no effect. At length, unable to advance further, the New Englanders retreated back to their camp. The Canadians and Indians maintained the pressure thereafter by skirmishing closer and closer to their camp. By the night of October 21–22, the New Englanders were utterly discouraged and made a spontaneous general retreat to their ships in a state of near panic, even leaving behind five of their field guns on the shore. Thus far, about 150 New Englanders had been killed or wounded in action and many more would die of exposure and sickness. The French and Canadians had suffered, at most, nine killed and 52 wounded (but only eight known wounded for certain). On October 23, Phips and his fleet sailed back to Boston. Thus ended the first siege of Québec.

The old and new fortifications, essentially the batteries, had proven more than a match for Phips' ships when they tried to bombard the city. The batteries on the waterfront had not been seriously damaged while those further up were unscathed. The weak point had been the Beauport shore where the New Englanders had landed; but they had been contained and driven back. However, if a stronger force landed there with siege artillery, the city could be attacked on the landward side. Obviously, the hastily built wall would have to be improved. For the New Englanders, a most important lesson had been learned: they could not, by themselves, take Québec; to achieve such an objective, the resources of Old England would have to be brought in.

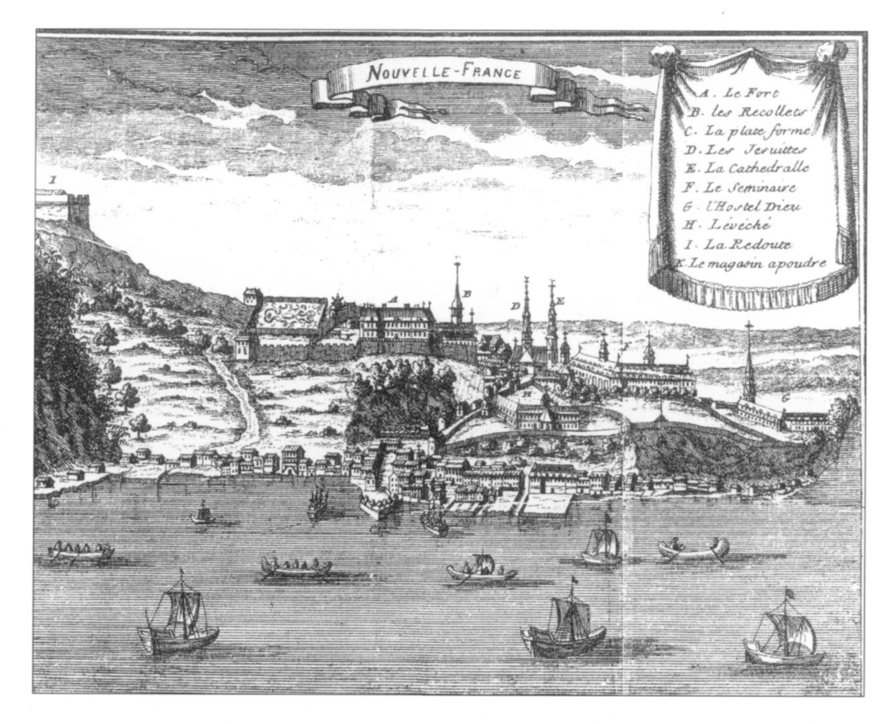
Improvements

Although the attack had been repulsed, Governor-General Frontenac was well aware of Québec's weaknesses



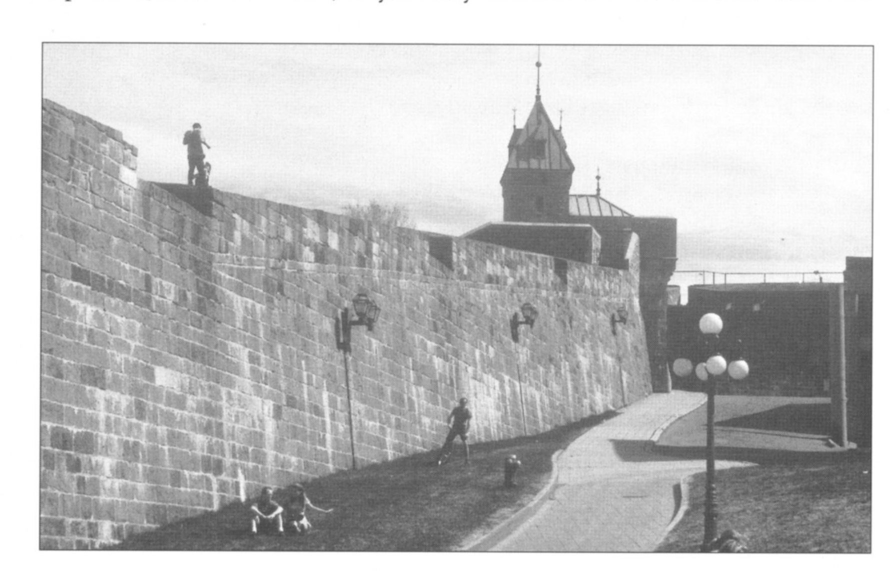
A plan of the works at Québec started in September 1693 by the engineer Berthelot de Beaucours. On the landward side was a new line of earthworks "at the top of which are stakes that join each other." Work on the line proceeded slowly and it was not completed until 1702. Another new feature built in 1693 was a square stone redoubt on top of Cape Diamond (visible at left), which commanded the whole area. Fort Saint-Louis remained the city's main fort. Various walls and batteries were built along the heights of the upper city. The lower city's main defense was the waterside Royal Battery. (National Archives of Canada)

A view of Québec in 1700. The improvements made to the city's defenses since Phips' 1690 siege are shown in this print. The Royal Battery protects the harbor. To the left (or west) of the fort and the Château Saint-Louis (A) is a wall with cannon embrasures extending to a small stone tower with a palisade up the hill connecting to another tower; these are two of the redoubts built with the 1690 palisade that enclosed the city. On the height of Cape Diamond at left is the Cape Redoubt (I); built in 1693, it was the beginning of de Beaucours' rampart (invisible on this print) started that year. (Private collection)

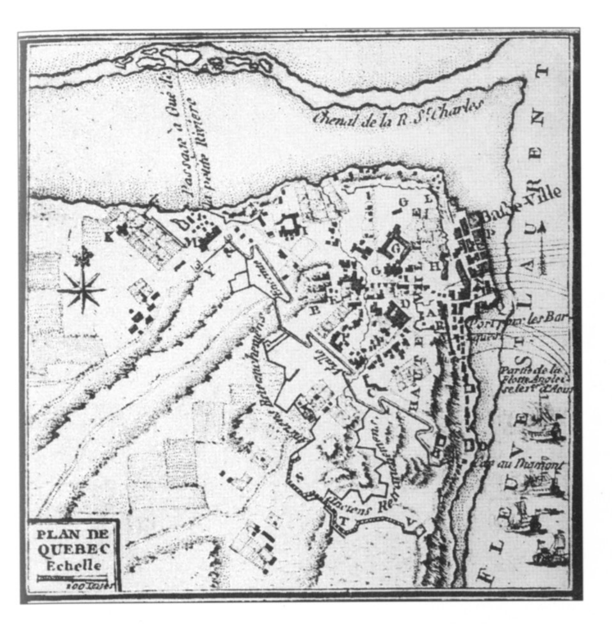


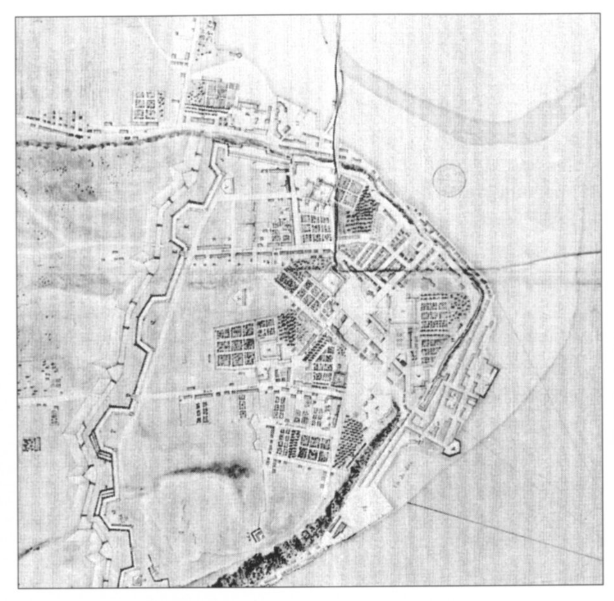
and, in 1692, tasked Engineer Josué Berthelot de Beaucours with the design and construction of new fortifications on the landward side that could withstand a European-style siege. Work started in the summer of 1693 on an earth rampart with large bastions, which enclosed the city. Pointed wooden stakes were planted on top of the walls. Two masonry structures were also built: the Cape Diamond Redoubt on top of the highest spot on the cape and the *cavalier* du Moulin in the first bastion. The building work continued slowly for nine years. In the meantime, a new engineer, Jacques Levasseur de Néré, had arrived and disagreed with just about everything de Beaucours had constructed. The new fortifications did indeed have some defects; most could be enfiladed from various heights outside the fortifications. The resulting disputes put a stop to any major works for some time to come.

In 1711, during Queen Anne's War (1702–13), another attempt was made to capture Québec. This time, Royal Navy Admiral Hoveden Walker sailed for



Québec's ramparts just above the Saint-Jean gate. These are the walls constructed in 1745. (Author's photograph)





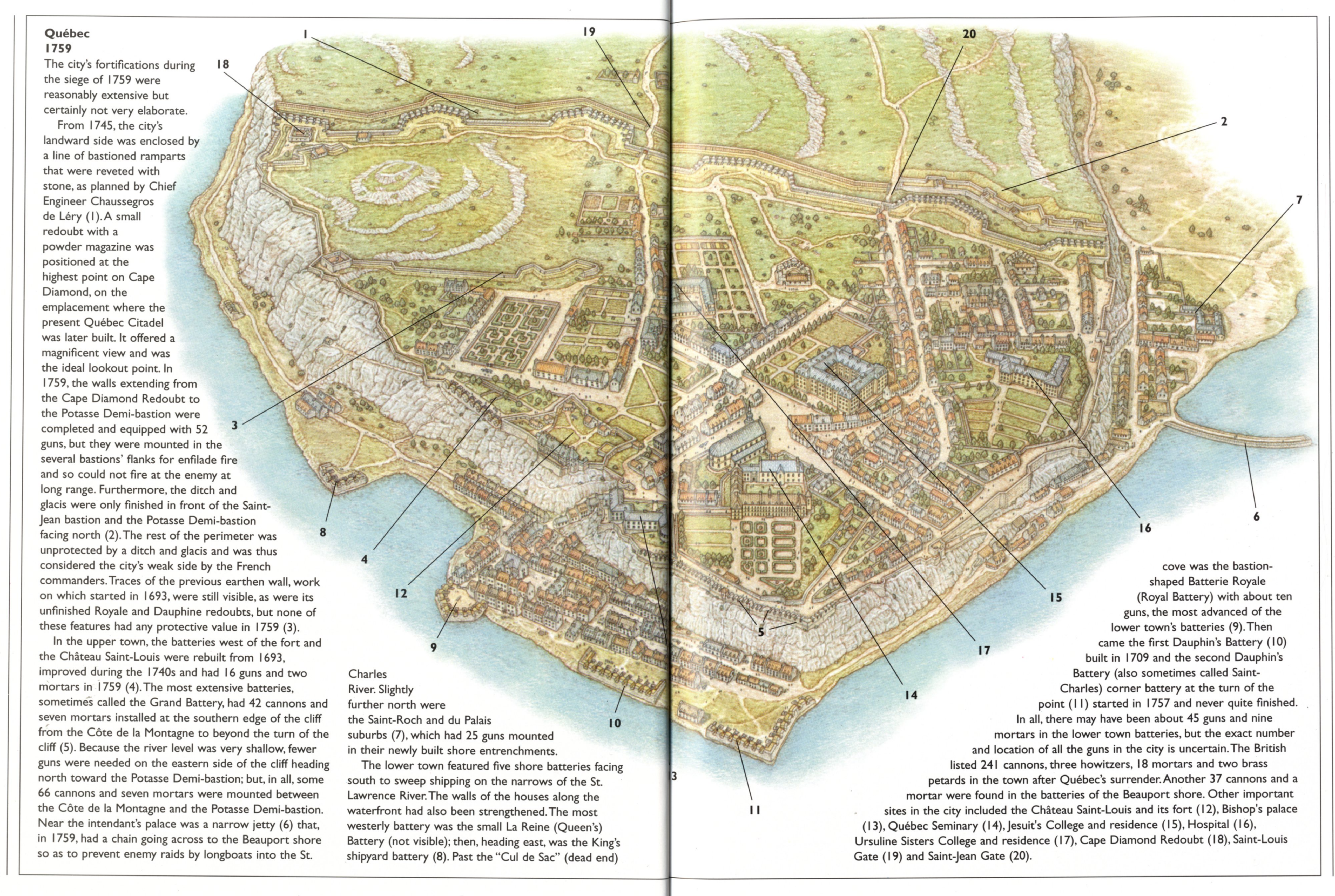
Québec leading nine warships, two bomb ketches, and 60 other vessels carrying eight British infantry regiments and two New England militia regiments; some 7,500 soldiers in all. But fate stepped in. On the night of August 22–23, the fleet was sailing north of Anticosti Island as it entered the St. Lawrence River. The weather was bad and eight transport vessels carrying troops ran onto the reefs of Egg Island with disastrous consequences: 29 officers and 705 soldiers belonging to four of the eight British regiments of regular troops were lost, as well as 35 soldiers' wives. Walker turned back and Québec was spared another siege. But because the British might return, in 1712 work started on the Dauphine and Royale redoubts to cover the north side of the city on the land side. In 1713, war ended; work on the Royale Redoubt was nearing completion but the Dauphine Redoubt was only half-finished and remained unusable for many years to come.

In 1716, Chief Engineer Gaspard Chaussegros de Léry arrived in Canada. He immediately submitted several plans to improve Québec's fortifications. A talented engineer, he at once saw that the city's weak point was in its western approaches and made plans for a new line of works on the western (landward) side of the city to replace de Beaucours' crumbling quarter-century-old earthworks. A regular bastioned wall faced with masonry was necessary. De Léry's main proposal to make the place almost impregnable was to build a citadel on the highest point of Cape Diamond. By 1720, he even had a scale model of Québec made and shipped to France for the minister of the navy and colonies to consider his proposals; this model featured the new fortifications that should be built. (De Léry's model has never been found and seems to have been destroyed. Another model of Québec was made in 1806–08 by J-B Duberger and Captain John By, RE, and is now on display at the Québec Fortifications National Historic Site in the Saint-Jean Bastion.)

De Léry's plans to improve Québec's defenses were rejected due to fiscal restraint. Besides, it was considered more urgent to fortify Montréal, which hardly had any defenses, and to build substantial forts at Pointe à la Chevelure (renamed Saint-Frédéric; Crown Point to the British and Americans) and Niagara. Québec was imposing enough for the time being, especially as France and Britain were at peace, and so practically nothing was done until war broke out again in 1744. The fall of Louisbourg, in the summer of 1745, came as a shock to people in Québec. Nothing now stood in the way to prevent a British force from sailing up and attacking the city.

ABOVE LEFT Québec, 1709. This is possibly the most famous map of Québec as it has been published in countless books, notably in Father Charlevoix's *Histoire de la Nouvelle-France* (1744). It was attributed to Chaussegros de Léry in 1720 and Royal Engineer Patrick Mackellar used it in 1759 as his main source for a map of Québec. Close examination reveals that the line of fortifications enclosing the city's western side is that put up in 1693 by de Beaucours. The unfinished line of ramparts further to the left are those built by Levasseur de Néré between 1700 and 1707. Because the second line of fortifications featuring the Dauphine and Royale redoubts started by Levasseur de Néré in 1712 is not shown, the map can be dated to 1709 as Father Charlevoix was in Canada between 1705 and 1709. (Private collection)

ABOVE RIGHT In 1745, a new line of fortifications further west was started and these are the present-day walls of Québec on the landward side. Except for the glacis and earthworks outside the wall that were never finished, this 1752 plan by Chief Engineer Chaussegros de Léry shows the city essentially as it was when General Wolfe's army besieged it in 1759. De Léry also drew in future streets and rectangular city blocks in the upper city's west side and future square city blocks bordered by walls and bastions in the vacant lots of the lower city's northeast area. (National Archives of Canada, C21779)



Québec 1759

The city's fortifications during the siege of 1759 were reasonably extensive but certainly not very elaborate.

From 1745, the city's landward side was enclosed by a line of bastioned ramparts that were reveted with stone, as planned by Chief Engineer Chaussegros de Léry (1). A small redoubt with a powder magazine was positioned at the highest point on Cape Diamond, on the emplacement where the present Québec Citadel was later built. It offered a magnificent view and was the ideal lookout point. In 1759, the walls extending from the Cape Diamond Redoubt to the Potasse Demi-bastion were completed and equipped with 52 guns, but they were mounted in the several bastions' flanks for enfilade fire and so could not fire at the enemy at long range. Furthermore, the ditch and glacis were only finished in front of the Saint-Jean bastion and the Potasse Demi-bastion facing north (2). The rest of the perimeter was unprotected by a ditch and glacis and was thus considered the city's weak side by the French commanders. Traces of the previous earthen wall, work on which started in 1693, were still visible, as were its unfinished Royale and Dauphine redoubts, but none of these features had any protective value in 1759 (3).

In the upper town, the batteries west of the fort and the Château Saint-Louis were rebuilt from 1693, improved during the 1740s and had 16 guns and two mortars in 1759 (4). The most extensive batteries, sometimes called the Grand Battery, had 42 cannons and seven mortars installed at the southern edge of the cliff from the Côte de la Montagne to beyond the turn of the cliff (5). Because the river level was very shallow, fewer guns were needed on the eastern side of the cliff heading north toward the Potasse Demi-bastion; but, in all, some 66 cannons and seven mortars were mounted between the Côte de la Montagne and the Potasse Demi-bastion. Near the intendant's palace was a narrow jetty (6) that, in 1759, had a chain going across to the Beauport shore so as to prevent enemy raids by longboats into the St. Charles River. Slightly further north were the Saint-Roch and du Palais suburbs (7), which had 25 guns mounted in their newly built shore entrenchments.

The lower town featured five shore batteries facing south to sweep shipping on the narrows of the St. Lawrence River. The walls of the houses along the waterfront had also been strengthened. The most westerly battery was the small La Reine (Queen's) Battery (not visible); then, heading east, was the King's shipyard battery (8). Past the "Cul de Sac" (dead end) cove was the bastion-shaped Batterie Royale (Royal Battery) with about ten guns, the most advanced of the lower town's batteries (9). Then came the first Dauphin's Battery (10) built in 1709 and the second Dauphin's Battery (also sometimes called Saint-Charles) corner battery at the turn of the point (11) started in 1757 and never quite finished. In all, there may have been about 45 guns and nine mortars in the lower town batteries, but the exact number and location of all the guns in the city is uncertain. The British listed 241 cannons, three howitzers, 18 mortars and two brass petards in the town after Québec's surrender. Another 37 cannons and a mortar were found in the batteries of the Beauport shore. Other important sites in the city included the Château Saint-Louis and its fort (12), Bishop's palace (13), Québec Seminary (14), Jesuit's College and residence (15), Hospital (16), Ursuline Sisters College and residence (17), Cape Diamond Redoubt (18), Saint-Louis Gate (19) and Saint-Jean Gate (20).

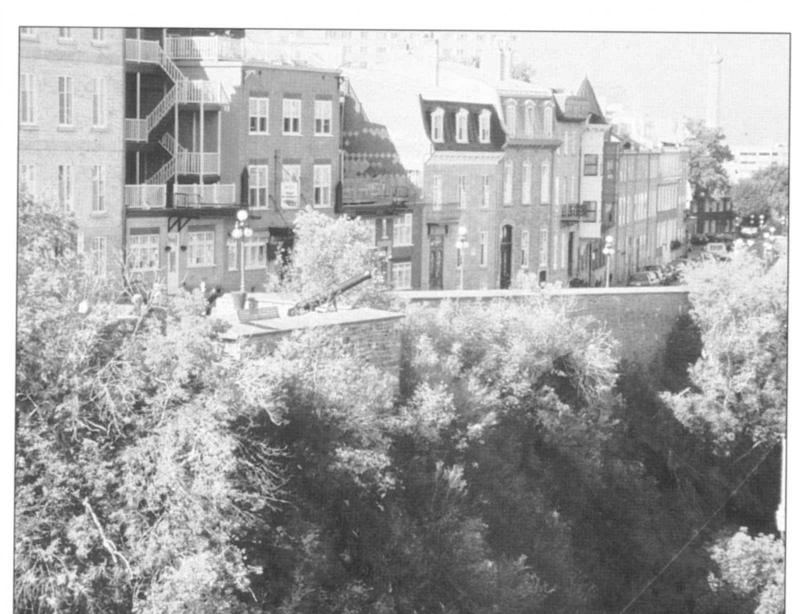
Improving Québec's fortifications became the order of the day. De Léry's plans called for the construction of a classic Vauban-style wall with four large bastions and a demi-bastion at each end. The bastions provided for one of Vauban's basic principles in defensive works: the protection of the ditch by crossfire from the flanks of the bastions. By the fall of 1745, hundreds of men were busy constructing the ramparts. The contractor hired specialized craftsmen and their apprentices as well as some soldiers familiar with building trades, but they were much too few in number. To obtain the necessary manpower, the government decreed a *corvée*—compulsory labor for a public work—on every able-bodied man aged from 16 to 60 within a radius of 40 French miles to help construct the rampart. They put up the masonry stone wall with buttresses and filled the inside with earth to make up the rampart. Just outside the wall, a ditch with a glacis was planned but only a small portion of it was built, in front of the Saint-Jean Bastion.

In 1748, de Léry completed the unfinished Dauphine Redoubt originally designed by de Beaucours as an arms and ammunition storehouse. The following year, it was transformed into a barrack. Close by, the Nouvelle Casernes (New Barracks) were built from 1749 to 1752 to house the garrison. It was an imposing structure and, at over 520 feet from end to end, the longest building in North America at that time.

The 1759 siege

The Austrian Succession War ended in 1748 but another conflict was expected and, in 1754, it broke out in the wilderness of the Ohio Valley. By 1756, war had been formally declared between France, Britain and most other major European nations. Governor-General Vaudreuil worried about Québec's defenses and, in October 1756, noted that little had been done since the 1740s to improve the ramparts. Vaudreuil tasked the Engineer Nicolas Sarrebrousse de Pontleroy, transferred from Louisbourg to Québec, with improving the city's fortifications. The batteries of La Genouillère and du Clergé were built and a 6-foot-wide wall was started but left unfinished on the upper east side near the St. Charles River. In America, the British and Americans slowly gained the advantage over the French, thanks to their greatly superior forces. When Louisbourg fell in July 1758, it opened the way to Québec. It was now obvious that the city would be the next target.

A small battery still armed with two guns positioned along the rampart edging Québec's upper town. Batteries were built in that area and at various other points along this rampart from 1690. (Author's photograph)

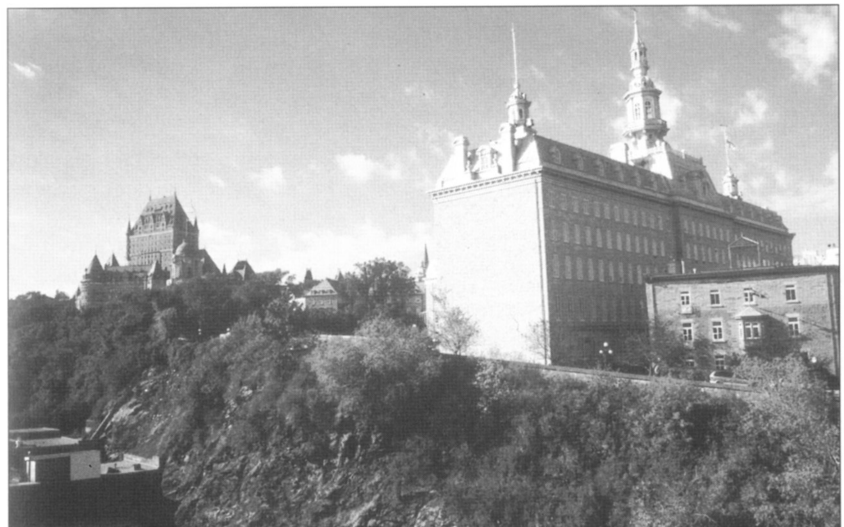
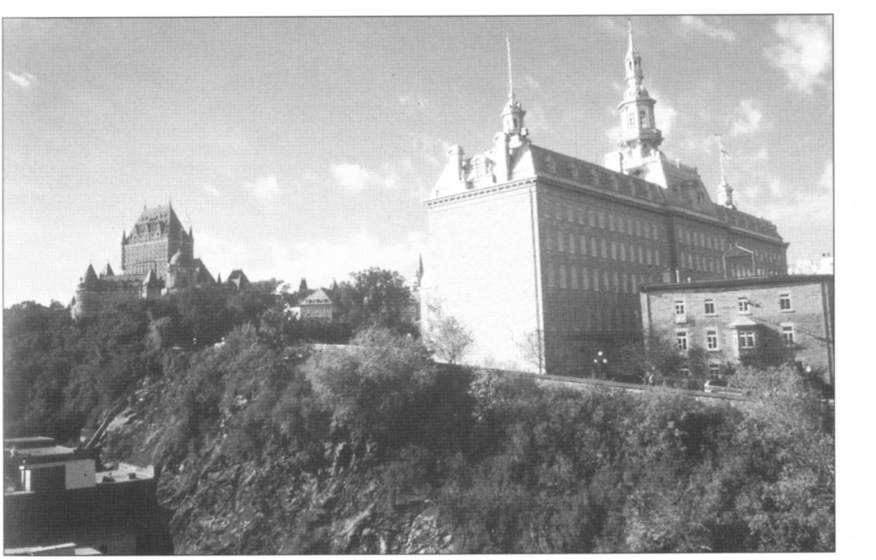


Pontleroy, as well as many French army officers sent to Canada, had little confidence in the ramparts put up since 1745. As Louis-Antoine de Bougainville, General Montcalm's aide-de-camp, put it, Québec "was without fortifications" and would be difficult to fortify, adding, "if the approaches to the city were not defended, the place would have to surrender." General Montcalm thought much the same, as did Pontleroy. Perhaps their judgement on de Léry's ramparts was somewhat hasty but they saw it as an unfinished piece of work without ditches and glacis. By the standards of the day, the walls would thus have been easily breached by enemy siege artillery. It was therefore essential to deny the enemy a foothold on the north shore of the St. Lawrence River. If such a thing occurred, it was expected that the British, with their superior resources and greater numbers of regular soldiers, would prevail and the city would be doomed. It was therefore essential to build redans and batteries along the whole length of the north shore, from the Montmorency River to the city. But everything else also had to be improved. It was a tall order.

By the spring of 1759, an attack on the city was daily expected and so the defenses were in the process of being strengthened. Thousands of men were employed building new fortifications and improving old ones all over the city. A strong barricade closed the Côte de la Montagne road to the upper city. The suburbs of Saint-Roch and du Palais were enclosed and armed with 25 cannons. Some 66 cannons and seven mortars were installed between the Côte de la Montagne and the Potasse Bastion and another 52 cannons were installed on the western side. Between the Château Saint-Louis and the Cape Diamond Redoubt, another two batteries holding 16 cannons and two mortars were built.

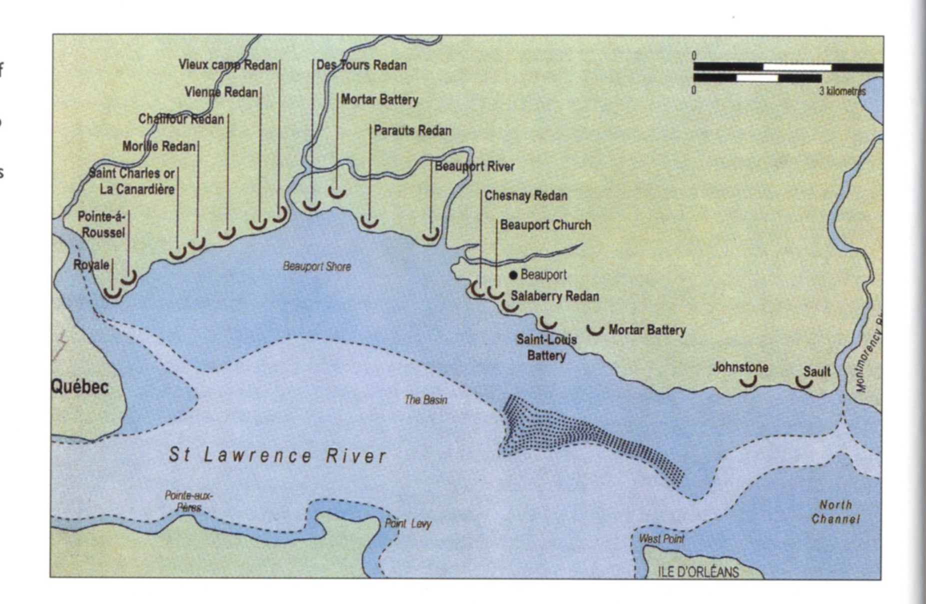
Québec's landward defenses in 1759. Chief Engineer Chaussegros de Léry was responsible for the design of the walls that had been built in 1745. A ditch with a glacis was planned but, by 1759, only a small portion of it had been built, in front of the Saint-Jean Bastion. (Osprey)

Perhaps the most impressive effort was to fortify the length of the Beauport shore, from the falls of the Montmorency River, which would act as the eastern (or left) side of the French army. Pontleroy felt that it was the weak point, especially in the area about La Canardière where Phips' men had landed in 1690. A first entrenchment line was built in May running along the St. Charles River up to the General Hospital. Pontleroy wanted to close access to the river and had two ships scuttled at its entrance. They were transformed into advanced batteries. Behind were more obstacles including a boat bridge and a floating battery called La Diable (The She-Devil) holding 18 cannons of 24-pound caliber. By the end of June 1759, many batteries, redoubts and redans had been built along the Beauport shore, both on the cliff and on the beach, some mounted with guns. General Montcalm listed the following on 27 June:

A view of the cliff separating the upper town from the lower town with the rampart edging it, occasionally punctuated by batteries. The large gray building with spires is a wing of the Québec Seminary of Laval University, built in the late 19th century but originating in 1664, the fourth oldest university in America. Further away is the Château Frontenac. On the highest point of Cape Diamond beyond is the redoubt first built in 1693 and later incorporated into the citadel when the latter was built in the 1820s. (Author's photograph)

The redoubts and redans built in 1759 on the Beauport shore east of Québec City up to the Montmorency River. They proved to be resilient enough to prevent the British from landing. General Wolfe's attempt to storm the defenses just west of the Montmorency River on July 31 ended in a near-disaster. The Johnstone and Sault shore batteries were occupied but the British grenadiers were mowed down as they charged up the cliff. (Osprey)

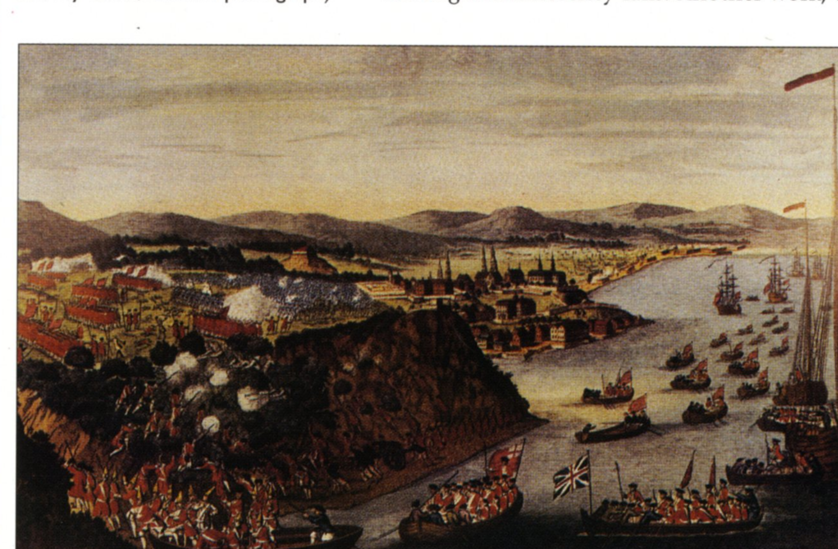


Pointe-à-Roussel Battery: three 12-pounder cannons, flanked by two redans
La Canardière Battery: three 12-pounders
Morille Redan
Chalifour Redan
Vienne Redan
Vieux camp Redan: three 8-pounders
Des Tours Redan
Parauts Redan: three 8-pounders
Redoubt of the mouth of the Beauport River
Chesnay Redan
Salaberry Redan
Redoubt below the church with two batteries: four 12-pounders
Saint-Louis Battery with two redans to be built
Sault Redoubt: three 8-pounders

The Sault Redoubt was the most easterly on the beach, just below the majestic-looking Montmorency falls. Another work, the Johnstone Battery, was also built on the beach, about 900 yards west of the Sault Redoubt. Behind all these works was a garrison of about 15,000 troops, mostly militiamen.

In late June, the anticipated invasion force came into sight as an enormous fleet made its way on the St. Lawrence River. On board were some 10,000 regular soldiers and 13,000 sailors with a powerful train of artillery. In the following months, part of the lower town was destroyed by the constant British bombardments. However, that area was considered much too strong a position to attack. Both the shore batteries and the ones dotting the cliffs were likely to inflict severe losses on landing boats full of redcoats while their ships would have only a slim chance of hitting anything important in the city. Once landed, the surviving troops would then be set upon by superior numbers of French soldiers and Canadian militiamen.

A composite view of the landing place at Anse-aux-Foulon showing the British longboats carrying troops, the ascent and subsequent skirmishing on the heights and the battle of the Plains of Abraham on September 13, 1759. Québec, with some of its fortifications, is in the middle ground and the Beauport shore is at the far right. (Print after Hervey Smith; Author's photograph)

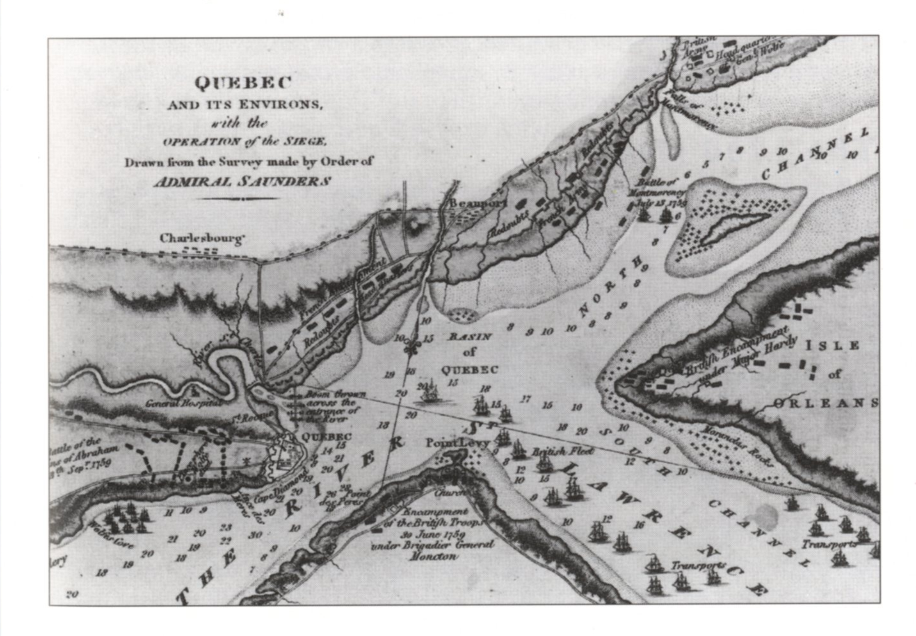




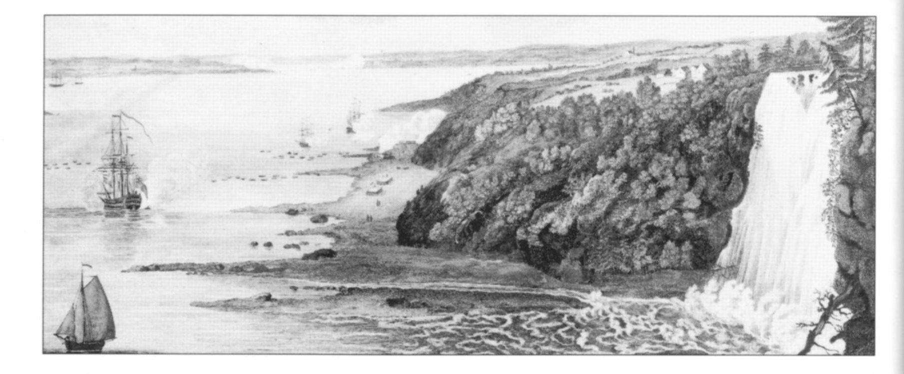
A view of Québec from the north, 1759–60. At left is the unfinished Redoute Royale, built from 1712 and nearly completed on the unfinished line of fortifications started by de Beaucours. The Ursuline sisters' convent and college are in the center. The ramparts built from 1745 are behind the viewer and cannot be seen. What can be seen is that the area between the old and the 1745 ramparts was left largely vacant and used to keep livestock. (Print after Richard Short; National Archives of Canada, C358)

General Wolfe opted instead to land and attack just west of the Montmorency River and its majestic falls. He believed that if a breach could be made in the French fortifications on the Beauport shore, the army could assemble and roll over the French all the way into the city. Québec could then be invested and pounded into submission. In reality the assault, which took place on July 31, was a total failure. The French works on the Beauport shore, at the points attacked, proved to be quite resilient. Once the beachhead had been established, the British grenadiers found themselves to be within range of skirmishers hidden on the cliffs and at other points above the beachhead. A charge up the cliffs failed and, with heavy casualties being sustained, General Wolfe saw that it was no use and ordered a retreat.

For the next six weeks, the British prodded with no hope of piercing the defenses. Finally, in desperation, a daring plan was hatched. The only way to land on the north shore might be at a point west of the city. The cliff past Cape Diamond was quite high but there were no important field fortifications there.



"Quebec and its environs, with the operation of the siege. Drawn from the Survey made by Order of Admiral Saunders" 1759. This plan shows the city, the British fleet in the St. Lawrence River and the French fortifications on the Beauport shore. The British camps are on the south shore, the Isle of Orleans and east of the Montmorency River. (National Archives of Canada, C14523)



"A View of the Falls of Montmorency and the Attack made by General Wolfe" on July 31, 1759. This print by Hervey Smith shows the cliffs along the Beauport shore from the Montmorency falls to Québec, far in the distance. The length of the shore was defended by many batteries, redoubts and redans which proved highly effective during the 1759 siege as they were largely invisible to the British. (Print after Richard Short; National Archives of Canada, C782)

The ramparts on the western side of the city did not seem to be in the best of conditions, according to Royal Engineer Patrick Mackellar, who had previously been detained as a prisoner of war in Québec. The amazing thing was that Mackellar was not aware of the new walls that had been built since 1745; his plans as submitted to General Wolfe still outlined the early-18th-century line of fortifications, not that it would have changed much in the final decision to attempt the landing.

On the night of September 12–13, thousands of troops were landed at Anse-aux-Foulons, west of the city, and managed to scale the cliffs and form up on the Plains of Abraham. During the siege of 1759, General Montcalm and other French officers often commented that the city's fortifications on the western side were in bad repair with gates that hardly closed shut. In some aspects, they were right; the ditch and glacis that were to provide for a parapet and a covered way outside the walls had not been completed. However, criticism concerning the adaptation of the defenses to the rolling terrain was unfounded. In any event, General Montcalm chose to come out with as many troops as he could gather to meet General Wolfe's redcoats. Both generals were mortally wounded in the ensuing battle, which was won by the British.

At the end of the September 13 battle on the Plains of Abraham, the pursuing British stopped at the walls and then retreated to a safe distance. Thus, the walls' weaknesses did not cause the city's subsequent surrender. It was more a question of discouragement amongst the defenders inside; not only had they lost the battle but their general had perished. The lower town had been under severe bombardment for months and was half-destroyed. No relief was forthcoming. Given these circumstances, and to avoid an assault by the British troops massing to the west, Québec surrendered on September 18, 1759, thus bringing to an end its second siege.

"A General View of Quebec from Point Lévy" 1759–60. The upper town was relatively unscathed but the lower town was heavily damaged as it was within the range of the British batteries at Lévy, across the river. (Print after Richard Short; National Archives of Canada, C355)

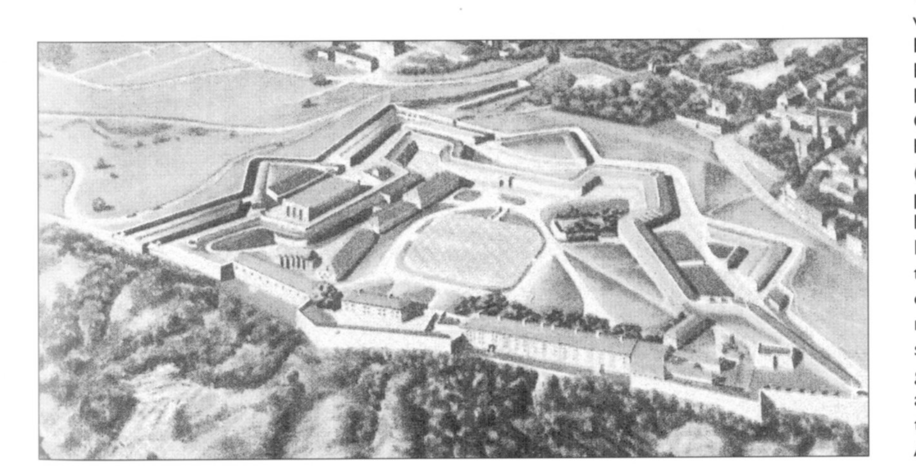
The 1760 siege

Following the surrender of Québec, the French troops retreated to Montréal. The British now settled themselves in Québec as best they could. Brigadier-General James Murray was in command with about 8,000 men to hold the city until the spring of 1760. They had to shore up the fortifications because General Lévis, Montcalm's successor, was rallying troops in Montréal and might try to retake Québec. Murray asked his engineers to see what could be done to reinforce the city's fortifications. Their report was none too encouraging. Mackellar estimated it would take a year of work to make the ramparts resistant to artillery, and that hardly any work could be done during a Canadian winter. Furthermore, some 700 of Murray's men died of sickness over the winter and many more were taken ill—hardly a suitable workforce. The best that could be done under the circumstances was to repair the damaged fortifications and install more artillery to increase the firepower. New embrasures were also made in the walls so that the guns could offer effective fire against siege batteries. Murray also ordered the demolition of houses that were too close to the ramparts so as to provide a clear field of fire. Finally, he had seven blockhouses built forward of the ramparts.

On April 26, 1760, General Lévis, at the head of about 7,000 French soldiers and Canadian militiamen, arrived on the western side of Québec. Brigadier-General Murray, like General Montcalm, regarded the city's fortifications as unable to withstand a siege by a regular force. He thus came out with about 4,000 men the next day, hoping to gain the initiative and beat Lévis on the spot in the open field. Both armies met at Sainte-Foy on the west end of the Plains of Abraham, just a few hundred yards from where Wolfe and Montcalm had fought. The battle of Sainte-Foy was a hard-fought affair in which the French finally prevailed; Murray had to spike all but two of his field guns but he managed an orderly retreat back into Québec.

Murray, now besieged in Québec, used the rampart effectively. For his part, Lévis did not have much heavy artillery and little gunpowder. He knew the weakest point to be the Glacière Bastion and what guns he had concentrated their fire on that target. The bastion's walls started to crumble, threatening a breach; the British gunners now reacted with a heavy cannonade on the French batteries. With little ammunition available to them, the French besiegers could hardly reply and had to limit themselves to a mere 20 shots a day. Both General Lévis and Brigadier-General Murray knew that under such circumstances, the first French or British ships bearing reinforcements to reach Québec would decide the issue. On May 9, a single British warship arrived, but Lévis still hoped for relief and continued the siege. On May 15, two warships, HMS *Vanguard* and HMS *Diana*, appeared on the river; the next day, the French army retreated to Montréal. Thus, Québec had successfully withstood its third siege, its ramparts never actually being breached and assaulted.

Years of peace followed until the American Revolution. In 1775–76, the existing walls discouraged the besieging Americans from attacking on the western side of the city. On December 31, 1775, they attempted an assault through the lower town, but were repulsed with heavy losses caused by the Canadian militiamen and a small force of British regulars. The Americans finally withdrew in June 1776. This fourth siege by the Americans was destined to be the last siege Québec would have to endure.



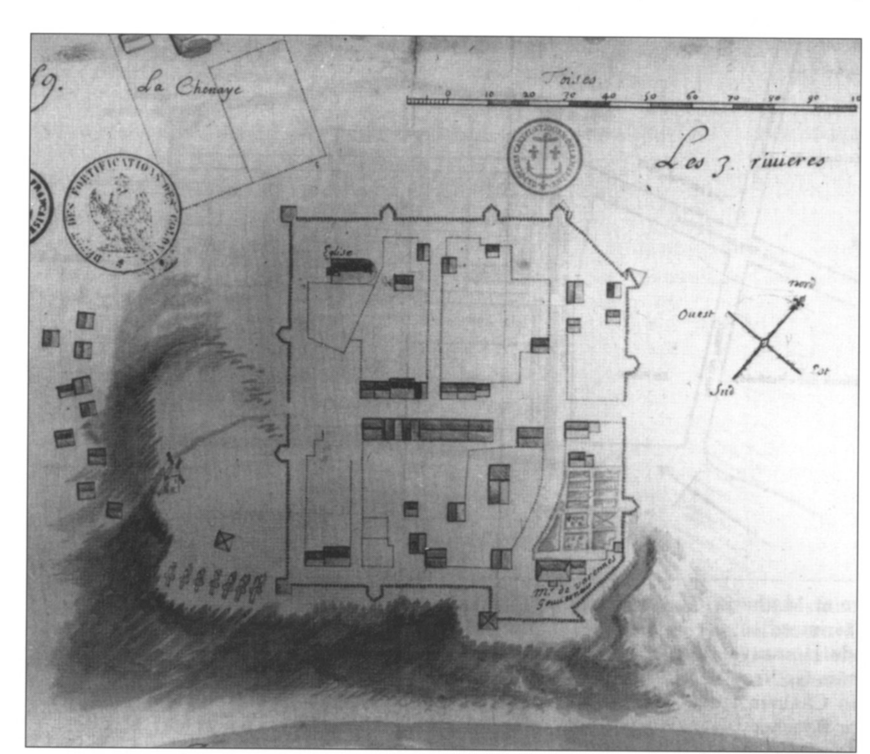
The present-day Québec Citadel was built between 1820 and 1832. Designed by Lieutenant-Colonel Elias Walker Durnford of the Royal Engineers, it incorporated the 1693 Cape Diamond Redoubt and battery into the King's Bastion (lower right), the buttressed French powder magazine behind the barracks in the Prince of Wales' Bastion (lower left) and a section of the 1745 wall with the citadel. The citadel is now both a national monument (incorporating the summer residence of the governor-general of Canada) and an active army base as the headquarters of the Royal 22e Régiment. (*Canadian Army Journal*, July 1952)

Trois-Rivières

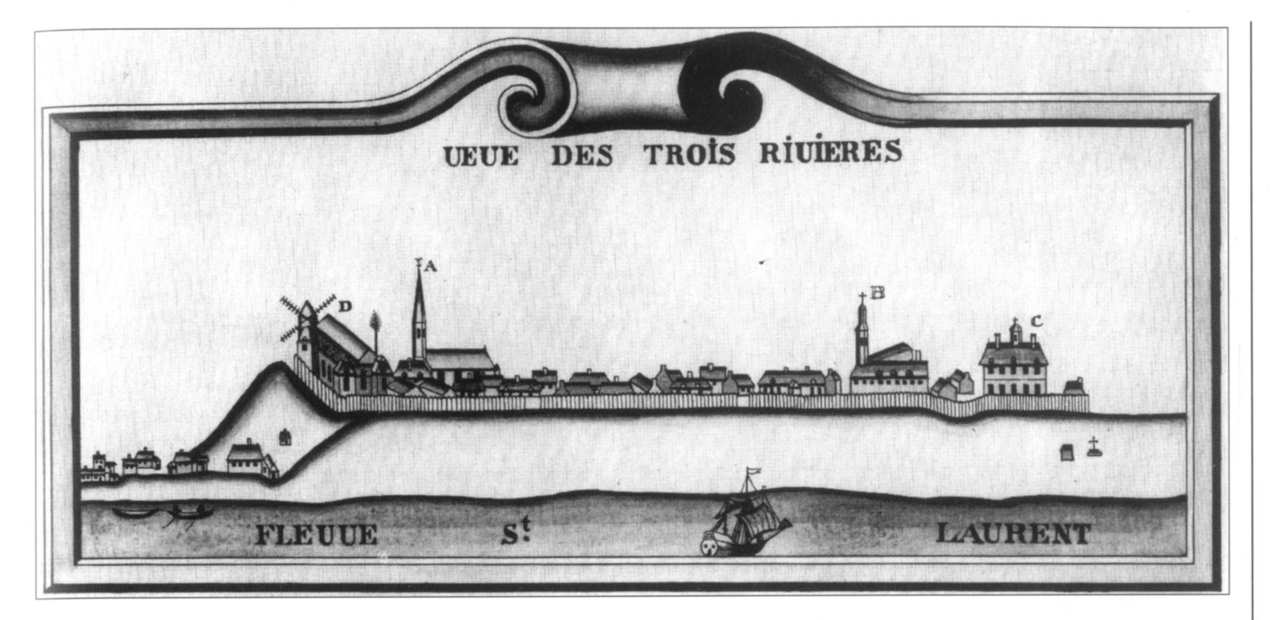
The town of Trois-Rivières, while not an important fortress as such, was more substantial than a fortified village or an outlying fort. As early as 1615, a mission for Indians had been set up there by Franciscan lay brother Pacifique Duplessis. Because of this, a few notes are given here on the development of the town, its fortifications and its ironworks.

Following the return of Québec to the French in 1633, Governor Samuel de Champlain wished to have a post further west to support penetration further into the interior. In 1634, a party of settlers led by Louis de La Violette landed where the Saint-Maurice River flowed into the St. Lawrence River from the north and founded a town. At the mouth of the Saint-Maurice River were two large islands, giving the impression that three rivers flowed into the St. Lawrence, hence the site's name of Trois-Rivières (Three Rivers). There the settlers built a "Habitation" to which two more buildings for lodgings, a magazine and a "platform garnished with cannon" had been added by 1636. Early on, Trois-Rivières was established as a distinct entity with its own governor and garrison staff. Like Québec and eventually Montréal, Trois-Rivières became the capital of the settlements in its immediate area. It was the military and civil administrative headquarters for the District of Trois-Rivières, one of three districts, comprising the French town and villages in the St. Lawrence River Valley.

Trois-Rivières did not remain Canada's most westerly settlement for very long. In 1642, Montréal was founded and because of its strategic position at the crossroads of the St. Lawrence, Ottawa and Richelieu rivers, it soon surpassed Trois-Rivières in importance as a commercial and military town. Nevertheless,



A plan of Trois-Rivières in 1685. Since 1650, the town had been protected by a stockade that grew with the city. An eight-gun open battery is on the cliff just outside the southwest corner. (National Archives of Canada, C16055)



A view of Trois-Rivières in 1704 as seen from the St. Lawrence River. The part of the town enclosed by walls is at the centre of the image. The letter "A" denotes the parish church; "B" is the mission of the Recollet fathers; the large building with a spire is the Ursuline sisters' convent, hospital and school, built in 1697 (and still active today), and "D" is the powder magazine. (National Archives of Canada, C15784)

Trois-Rivières thrived; but, by the late 1640s, it was exposed to relentless attacks by Iroquois raiders. Inhabitants carried arms when going out and, beginning in the spring of 1650, a palisade was built to enclose the settlement. This turned out to be a very wise measure when, in August 1652, a very large war party of Iroquois ambushed and killed the town's governor and 15 of his men near Trois-Rivières. In April of the following year, some 600 Iroquois surrounded and attacked the town. Fortunately its fortifications, which now featured a redoubt, withstood the assault and, under the leadership of Captain Pierre Boucher, a seasoned soldier and fighter, the garrison of 46 soldiers and inhabitants repulsed the Iroquois attackers.

The Iroquois menace became far less acute from the later 1660s, but the palisade wall was kept up and an artillery battery was located just outside overlooking the river. An order of January 1706 called for cedar logs for the palisade and they could be seen still in good repair in 1721. Each log was 10–12 inches in diameter and some 12 feet in height. They enclosed the town until May 19–21, 1752, when a major fire consumed several buildings and the town's log palisade. When Engineer Colonel Franquet inspected Trois-Rivières in July and August 1752, he recommended rebuilding the fortifications with an earth and masonry wall; but by then the town was of minor strategic importance and so there was no sense of urgency to carry out his recommendations. Nothing was done and, from then on, Trois-Rivières was an open city without fortifications. The British occupied Trois-Rivières in the summer of 1760, followed by the Americans during their 1775–76 invasion.

Another feature of Trois-Rivières was the rich deposits of iron ore located a short distance north of the town. These began to be exploited from 1733 as the Forges du Saint-Maurice. These substantial ironworks, the first such industry in Canada, were sponsored by the French government mainly to provide the various iron implements required by the shipyard in Québec, in particular for the construction of warships there at the royal dockyards. In 1748, a few small-caliber naval iron guns were also cast at the Forges du Saint-Maurice, but they were found to be defective when inspected in France. This was due to the absence of an experienced gun founder at the ironworks. In any event, there was no lack of naval iron ordnance sent from France to Canada. However, getting ammunition could be a problem in Canada, with the result that cannonballs and mortar bombs were cast in quantity at the Forges du Saint-Maurice for many years.

Montréal

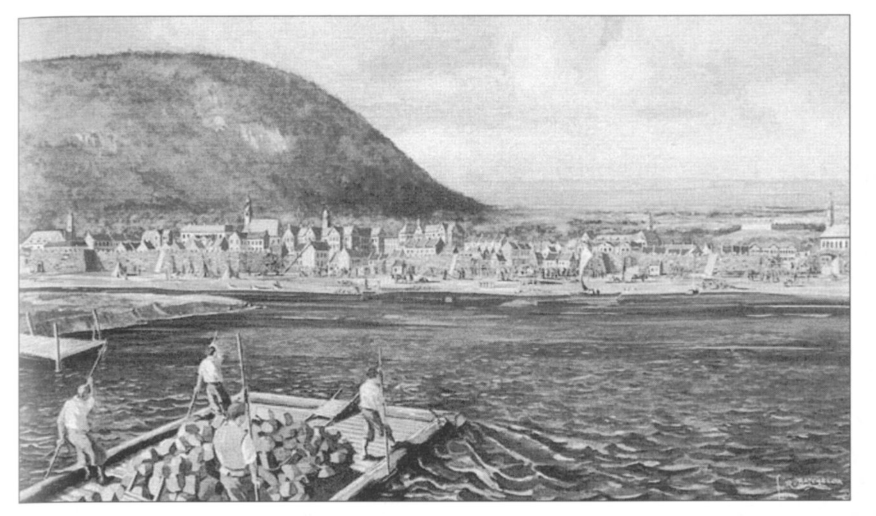
Montréal was founded on 18 May 1642 by a group of fervent Catholic settlers led by the Sieur Paul Chomedey de Maisonneuve who became the nascent town's first governor. Originally called Ville-Marie (City of Mary), the settlement initially consisted of a fort that contained a "Habitation." This was soon joined by a chapel and small houses built of squared logs, all of which were constructed at the same time by de Maisonneuve's order for fear of Iroquois attacks which began that year. Thereafter, Iroquois warriors were lurking everywhere and the settlement's inhabitants rarely ventured outside without being fully armed. The settlers and members of religious orders remained clustered in the fort which, in 1645, was substantially improved by Engineer Jean Bourdon. It seems bastions were also added at that time. For many years, the garrison usually consisted of about a dozen soldiers. It was only in 1653 that, thanks to the arrival of 100 new settlers, a great clearing of the forest was undertaken and houses began to be built in numbers outside the fort.

The new settlement was sited on relatively flat ground near the river but had in the background to the north the majestic Mont-Royal mountain. In time, the name Ville-Marie was replaced by Montréal as the original religious purpose of the settlement was overtaken by the activities of traders and, eventually, of soldiers as Montréal became the main military garrison in Canada. All this activity was a consequence of Montréal's exceptional strategic position; it was situated where the Ottawa River, flowing from the northwest, joined the St. Lawrence River. Not far to the east, the Richelieu River, flowing from Lake Champlain to the south, joined the St. Lawrence. This provided exceptional river highways to the heart of the continent.

Montréal's first quarter century was marked by the constant fear of raids by the Iroquois who controlled the rivers leading to the town. This changed drastically from 1665 with the arrival of the Carignan-Salières Regiment. The French, who now had the upper hand militarily, used these same rivers to attack Iroquois villages and expand their trade westward. The town's population shot up from about 75 to 600, plus soldiers.

The fort of Ville-Marie in 1645; it was built from 1642 and demolished in 1672. This 19th-century drawing is a conjecture of its possible appearance. The fort is known to have been bastioned but the appearance of the buildings shown is much more uncertain.

Up to 1672, Montréal was an ill-assorted cluster of various structures built not far from the river and the fort. That year, some city planning occurred when the main streets (Saint-Paul, Notre-Dame, etc.) were laid out, giving the town an elongated rectangle form running from east to west with a relatively narrow span north to south. Apart from the fort built near the small Saint-Pierre River in 1642–43, Montréal's defenses were practically nonexistent. The town depended on the several outlying forts on the island and on the south shore for its protection. Renewed warfare with the Iroquois from 1682 did not immediately rouse Montréalers, but over time the raids got increasingly closer. The appearance of Iroquois raiding parties at the western end of the island must have contributed to a decision being made to build a picket "wall" around Montréal.



Building the walls at Montréal, 1717–44. In the foreground, a large raft brings stones to be used to face the wall under construction from the west (left). The small citadel is at the eastern end (right). Mount Royal is visible in the background. (Painting by L.R. Batchelor c.1933; National Archives of Canada, C1540)

Palisades and ramparts

In 1687–89, a palisade was built by ordering the inhabitants to compulsory labour; this wooden wall enclosed the city for the first time. The wall was rebuilt in 1697–98 with large "cedar logs of 15 or 16 feet high fixed together with large nails and wooden joint," according to Sister Marie Morin's memoirs. This wall had five gates. A redoubt was also needed; during 1693 a small log fort was built atop the *coteau* (a little hill) to the east where a windmill had been built in 1685. In 1709, the growth of the city—by now its population had doubled to over 1,200—required the palisade to be extended east. The *coteau* fort was now within the picket walls but the Bonsecour suburb was still left outside its perimeter.

The next step aimed to make Montréal much stronger. In 1713, Intendant Bégon issued an order requiring Montréal to be protected by a stone rampart.

A plan of Montréal in 1724 by Gaspard Chaussegros de Léry. Begun in 1717, work to build the walls surrounding the city had been completed. There is little evidence of earthworks outside, nor were they much needed: the north side of the city walls sat high on a long east-to-west bluff; the south side bordered the St. Lawrence River; the northeast side (right) had two strong bastions and the small citadel. Only the southwest side (left) was weaker and, indeed, a suburb was already being built there outside the wall of the thriving fur trade business center of Canada. (Print after C. Bertrand, *Histoire de Montréal*, 1933)

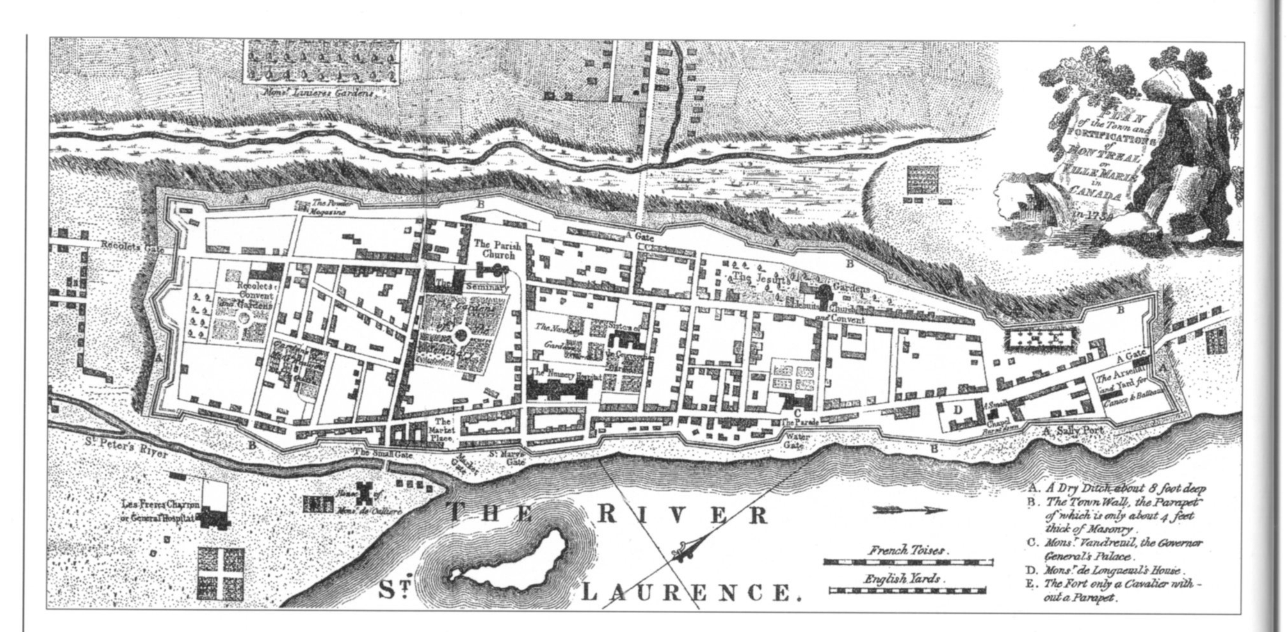


Montréal 1760

Chief Engineer Chaussegros de Léry chose to follow the previous outlines of the city, which formed a very long and narrow rectangle. Under such circumstances, a Vauban-style fortress design was impossible but de Léry may have been influenced by some of the town fortifications erected in the 16th and 17th centuries in his native Provence. At Montréal the ramparts took the form of long and narrow bastions with a modest ditch was dug on three sides. On the north side of the eastern end was the small hill with the little "citadel" on top. The gates and sally ports on the edge of the St. Lawrence River must have been the busiest as this was the main trading place in Canada. Fortress Montréal was thus well protected against any strong raiding party, rather than against a European-style siege.

Montréal's outlying forts

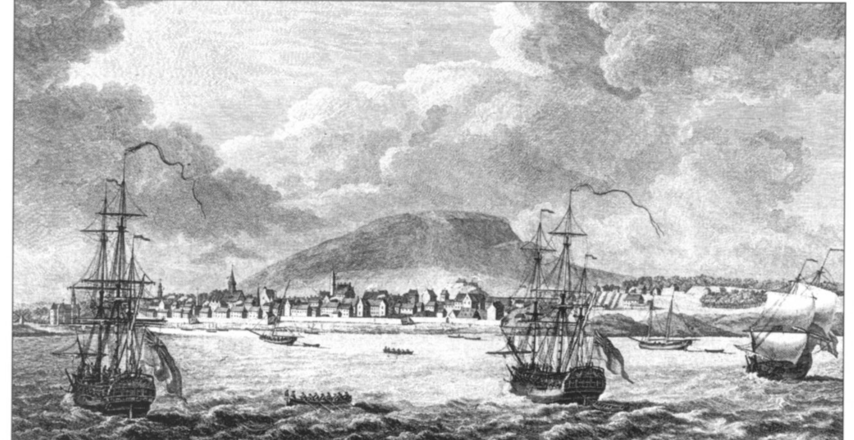
N
0 500 miles
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Québec
Fort at tip of Ile Jésus
Fort Côte Saint-Jean
Fort Ile Sainte-Thérèse
Fort Varennes
Fort Rivière-des-Pariries
Fort Pointe-aux-Trembles
Fort Boucherville
Des Prairies River
Fort Lorette
Fort Longue-Pointe
Fort Le Tremblay
MONTRÉAL ISLAND
Fort Longeuil
Fort Sainte-Marie
Montréal
Fort de la Montagne
Fort Saint-Lambert
Fort Saint-Gabriel
Forts on Saint-Paul Island
St. Lawrence River
Michilimackinac and West
Lake Deux-Montagnes
Fort Senneville and nearby fortified mill
Fort at Sainte-Anne-de-Bellevue
Fort at Pointe-Claire
Fort Gentilly
Fort Rolland
Fort Rémy
Fort Cuillerier
Fort Verdun
Fort at Ile Perrot
Lake Saint-Louis
Fort Ile Saint-Bernard
Rapids
Fort Sault-Saint-Louis
Fort La Prairie
Forts Frontenac and Niagara
Wooden Fort
Stone Fort
Stone Windmill
Stone windmills were frequently used by militiamen as watch towers and strongholds



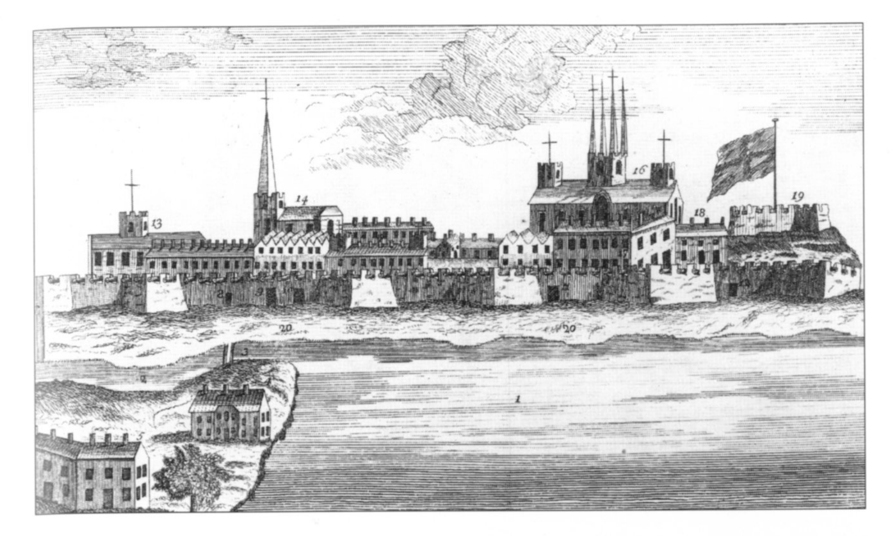
A plan of Montréal, 1745. First published in London during 1758, this document was a close copy from a French map of 1745 now in the King's Maps of the British Library. The French map appears to have been drawn by Chaussegros de Léry and might have been captured by the British on a French ship or copied by a spy. (Print after T. Jefferys)

This heralded four years of bureaucratic wrangling between government officials, religious orders and property owners over land titles and who would pay for the work. Chief Engineer Josué Dubois Berthelot de Beaucours drew up a first plan and some work started, albeit rather timidly, but it was interrupted following disapproval of the plans in France. However, the government confirmed its order to build the fortifications by a special tax levied on May 5, 1716. That year, Gaspard Chaussegros de Léry arrived as chief engineer and duly submitted a revised plan for the new fortifications that was approved. Work started in 1717 and continued until 1744.

De Léry's design for Montréal's fortifications followed the former log palisade as much as possible, so as to avoid going through privately owned land, as that would require costly demolitions and expropriations. The lengthy perimeter was therefore kept with the ends redesigned so as to enclose the Bonsecour suburb. In all, the new design added 20 percent to the city within the walls at a cost of only six houses and a brick-making work demolished. The new perimeter extended to about 10,800 feet of wall featuring 14 large bastions. It ran from the present McGill Street, its western end, to Saint-Hubert Street, its eastern end. The walls were 18 feet high and had embrasures at about every 6 feet. The wall on the landward sides was wider than that on the waterside as an attack from the river was considered most unlikely. There were eight gates, some with drawbridges, and eight smaller postern doors. A ditch with a glacis of about 80 feet was to be built outside the wall on the landward sides. As conceived by de Léry, the relatively narrow rampart was not meant to withstand heavy artillery fire as the chances of an enemy appearing with heavy siege cannons were thought to be very unlikely. However, its parapets with embrasures could provide exceptionally heavy fire to repulse any mixed raiding force of New Englanders and Indians that might attempt an assault.



"An East View of Montreal, in Canada" c.1760. This is one of the best views of Montréal as it appeared in the middle of the 18th century. (Print by P. Canot after a drawing by Thomas Patten; National Archives of Canada, C2433)



Montréal in September 1760. This print, first published in the *Royal Magazine* in December 1760 and later in John Entick's *History of the Late War...*, gives a rather crude view of the city. The anonymous artist was obviously impressed by the fortifications as the walls are prominent in this image and every embrasure has a cannon! A garrison-size British flag flies over the small citadel at right. (National Library of Canada, NL 15805)

The work to strengthen Montréal's fortifications continued slowly in the ensuing decades, sometimes due to budget constraints, sometimes because of the occasional resistance of Montréalers to paying taxes or to working on the fortifications. A notable incident occurred in 1717 when the inhabitants of Longueuil, on the south shore, refused to provide statute labor to build the Montréal wall, arguing that they should be improving their own defenses instead. Troops were sent to enforce the order but were met by armed Longueuil militiamen on the outskirts of the village. Fortunately, cooler heads prevailed and, after a two-day standoff between the troops and the militia, officials canceled the decree. The work therefore progressed slowly, all the more so as this was during a long period of peace. Nevertheless, by 1738, the bastions and curtain walls were complete, the last gate was erected in 1741 and, after another three years to complete various details, the wall was finally finished in 1744. Montréal was thus a fortress with a reveted stone wall. The small *coteau* fort was also improved when, in 1723, artillery was installed there and it effectively became Montréal's small citadel and military headquarters.

Montréal island's outlying forts

An unusual feature of the defenses of Montréal was the string of about 30 outlying forts erected in the second half of the 17th century when the Iroquois staged many successful raids (see map of these forts in 1702, after a plan by M. Vachon de Belmont, on page 35). The forts were built all around the town to control its approaches as well as on the south shore of the St. Lawrence River. The great majority of the forts were fairly modest with wooden stockade walls. However, four of them were substantial stone structures featuring masonry walls and medieval-looking round or square towers at the corners. None of these fortifications were meant to resist an attack by a European enemy equipped with siege artillery. Rather, they were meant to provide shelter for settlers in the vicinity and to resist attacks by Indians (and, on very rare occasions, New England militiamen). Many of these forts had detachments of regular soldiers until the early 18th century as well as guards of militiamen. Stone windmills also acted as small strongholds. Near each fort, at the river's shore, was a spot to make an alarm bonfire if the enemy was sighted. This alarm would be relayed in succession to Montréal where a cannon would be fired to warn soldiers and militiamen to prepare for action.

A peculiar fort, just a few hundred yards to the northwest outside the town of Montréal, was **Fort de la Montagne**, also called **Fort des Messieurs** and



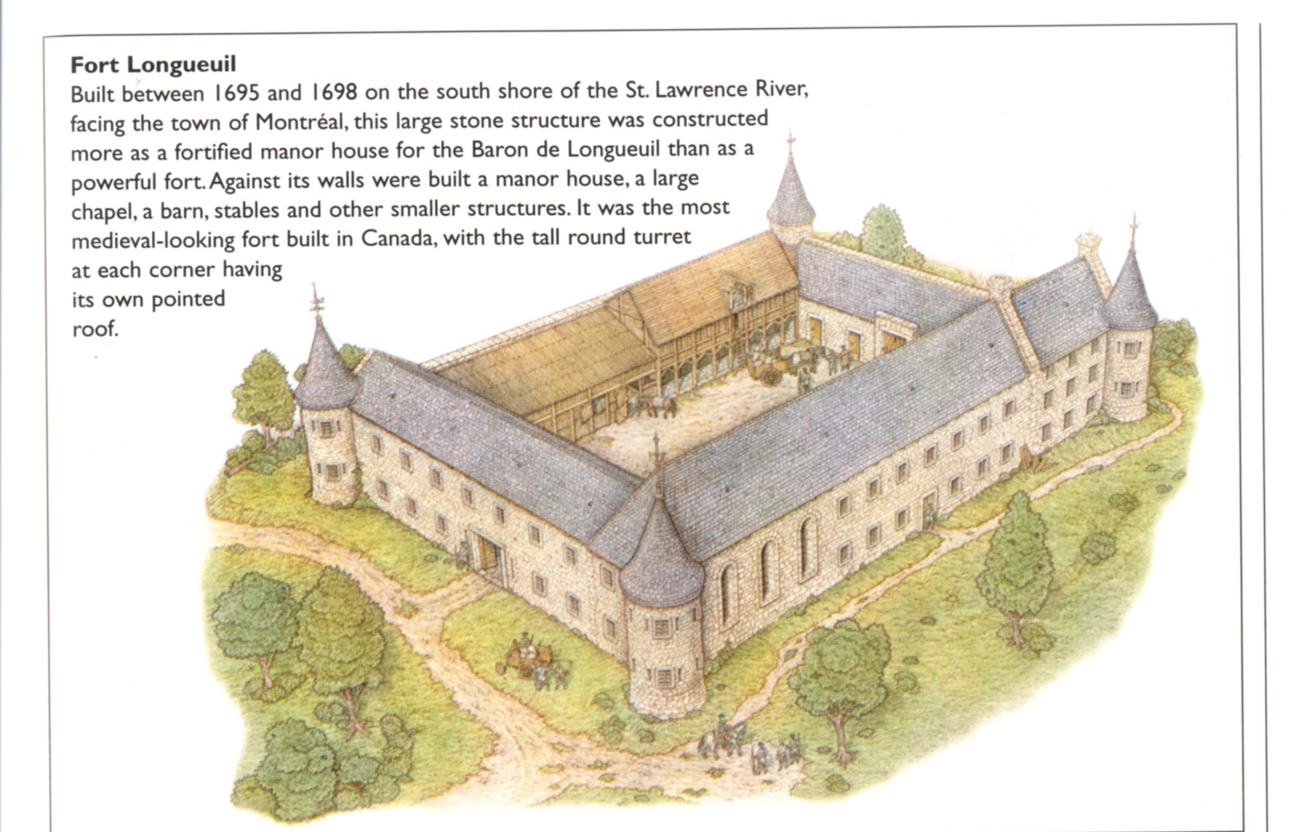
Montréal's stone outlying forts

Fort de la Montagne, 1690s

Built from 1685 just a few hundred yards outside of Montréal on the flanks of Mount Royal, the fort is shown as it appeared in the 1690s. The two turrets on the most exposed northern side had no roof and were open at the top. The two southern turrets were also used as a school by the Sisters of the Congrégation. The stone walls and turrets had loopholes. The mission priest's house was at the center, the chapel of Notre-Dame-des-Neiges was at the south wall, and a barn that doubled as a shelter for allied Indian women and children during attacks was at the north wall. An Indian village (not shown) was just outside on the west side.

Fort Senneville, 1700–1750s

The stone walls and corner tower/bastions were built at the western end of Montréal island from 1692 and Jacque Le Ber, the local *seigneur*, had his manor built against the wall before 1706. At the end of the 17th century, this was the area most exposed to Iroquois attacks. Therefore, Fort Senneville was possibly the most substantial castle-like fort built in the Montréal area. It could offer heavy musket fire from two-tier rows of loopholes in its walls and crossfire from its tower/bastions, which would have also featured small-caliber cannons and swivel guns.



Fort Longueuil

Built between 1695 and 1698 on the south shore of the St. Lawrence River, facing the town of Montréal, this large stone structure was constructed more as a fortified manor house for the Baron de Longueuil than as a powerful fort. Against its walls were built a manor house, a large chapel, a barn, stables and other smaller structures. It was the most medieval-looking fort built in Canada, with the tall round turret at each corner having its own pointed roof.

Fort de Belmont. It was built by the Sulpicians, a religious order devoted to the education of the settlers and Indians. Military sciences seem to have been among the subjects taught there, and, while details are still obscure, it seems that Canadian officer-cadets in the *Compagnies franches de la Marine* attended courses given by the Sulpicians from the mid-1680s. It is not known if any buildings were used for a specific military academy, but it would appear that the officer-cadets' activities took place in a small citadel and that classes were held in the Sulpicians' seminary. The Sulpician Order, which had come to Montréal in 1657, built a substantial seminary in the city center from 1684.

Led by Father de Belmont, the missionaries were often called the Messieurs de l'Ordre de Saint Sulpice by early Montréalers, hence the fort's nicknames. A first mission consisting of lodgings and a chapel was built in 1679 at the foot of Mount Royal. Because of renewed hostilities with the Iroquois, it was deemed wise to fortify the mission and, in about 1682, a rectangular wooden stockade 230 feet long by 114 feet wide



The recently excavated foundations of some of Montréal's walls in a park behind City Hall, once the area of the Jesuits' bastion. In this view looking east, the ditch between the glacis (left) and the ramparts (right) can be seen. (Author's photograph)

with earthen bastions at the corners was built to enclose the mission. Another stockade enclosed the village of friendly Indians next to the mission.

In 1685, Father de Belmont, who was also something of a military engineer, came up with a design for a stone wall 200 feet long by 140 feet wide with round turrets at each corner. This was immediately built. The wall was 11 feet high and the stone turrets were 43 feet high, the two south towers each having a pointed roof of timber and cedar shingles. It proved to be a wise precaution when, on May 17, 1694, a band of Iroquois partly destroyed the Indians' settlement while the mission fort resisted the raid. However, on September 11, 1694, a drunken mission Indian accidentally set fire to the adjacent Indian village with the result that the mission's wooden buildings suffered much damage. They were rebuilt in stone during the following years while the Indian village was moved and eventually resettled at Oka from 1721. The Sulpician mission's military role ended in the early 18th century and, after various transformations, the remaining mission buildings and walls were demolished during the 1860s. The two attractive southern turrets with their medieval-looking cone-shaped roofs were retained and still stand today in a little park surrounded by modern city buildings.

The western part of the island of Montréal was one of the most important strategic areas of Canada. Here the St. Lawrence River, flowing west to east from Lake Ontario, meets the waters of the Ottawa River coming from the northwest and the upper Great Lakes. Most of the vital fur trade was carried out on the Ottawa River route. Great convoys of canoes bearing all sorts of manufactured goods for the Great Lakes Indians who were assembled at Michilimackinac, would come back laden with valuable furs. As the convoys came down the Ottawa River they passed by the settlements of Senneville and Sainte-Anne-de-Bellevue and landed at Lachine, the traders' village west of Montréal. Other convoys going to and from Lake Ontario would also arrive at Lachine. It was impossible to go on further to Montréal because of the great rapids that lay between Lachine and the city.

The area west of Montréal was greatly exposed to attacks by the Iroquois in the second half of the 17th century and, in 1662, a stockaded outpost, **Fort Verdun**, was built west of the city. Slightly further west was Lachine, which was seemingly given its oriental name (it means China in French) in 1667 by explorer Robert Cavelier de La Salle, who later went on to great fame by descending the Mississippi River to the Gulf of Mexico. In 1671, a settlement cum fur trade post was established there. It initially consisted of a strongly built stone windmill (which also acted as a redoubt), a chapel, the house of the *seigneur* (roughly a squire), a trade store, barracks and several smaller buildings, all of which were surrounded by a wooden stockade with small bastions. It was called **Fort Lachine** and also, from 1680, **Fort Rémy**, after the arrival of Father Pierre Rémy, the parish priest. Settlers meanwhile built the village of Lachine some distance to the northwest, outside the fort, during the 1670s and 1680s. A small outlying stockaded fort was **Fort Cuillerier**, built to the east on the land of René Cuillerier in 1676. In 1670, **Fort Rolland** rose as a stockaded fur traders' fort west of Lachine and eventually had a garrison of regular colonial troops in the later 1680s. Further west was **Fort Présentation** (not to be confused with Fort La Présentation at present-day Ogdensburg, NY), also called **Fort Gentilly** or **Fort La Grande Anse**, which was built in 1674 at present-day Dorval.

Encouraged by the British in the New York colony, Lachine was attacked and many of its inhabitants horribly slaughtered by Iroquois warriors on the night of August 4–5, 1689. The attackers ignored the outlying forts and went right into the undefended village. At that time, there were soldiers in Fort Rolland and a column rushed out but arrived too late. This event had a tremendous impact for generations thereafter; henceforth the Canadians, with their superior tactics and woodcraft, wreaked havoc among enemy Indians and American colonists. Following the raid, Fort Rolland was vacated for Fort Lachine (or Rémy) which was closer to the village; its garrison was increased. Detachments were posted there until the end of the French Regime.



The defense of Montréal was largely dependent on outlying forts. In 1660, Adam Dollard des Ormeaux, the young commandant of the small garrison of Montréal, went up the Ottawa River with 16 French companions and 44 Indian allies. Meeting a large party of Iroquois warriors descending the river to attack Montréal, Dollard and his men put up an heroic defense in a ramshackle Indian picket fort at Long Sault. Most of the Indian allies defected. In the final assault, a powder barrel thrown out by Dollard hit a branch and fell back into the fort; most of the defenders were killed in the resulting explosion. It was said that the Iroquois were so impressed by the defense that they went no further, making Dollard and his companions the "saviors of New France;" a version of events that has since been contested. It nevertheless shows how important outlying forts were to Montréal's safety. (Print after René Bombled; Author's photograph)

Fort Senneville originated as a trading post built in about 1671, just above the western tip of the island of Montréal, about half a mile above the rapids at Sainte-Anne-de-Bellevue. By late 1686, Fort Senneville also featured a high stone windmill that doubled as a watch tower, its position on a hill offering a commanding view of the Ottawa River, the Lake of Two Mountains and the mouth of the smaller Des Prairies River. This windmill was like no other in New France: it had very thick walls, small square loopholes for muskets and, at the top, projections of masonry facing down—the machicolations of medieval castles in Europe—to enable lethal liquids and rocks to be dropped onto any attackers.

In October 1687, the nearby village of Sainte-Anne-de-Bellevue (a stockade called **Fort Sainte-Anne** had been there since about 1683) and the Senneville mill were attacked by marauding Iroquois; several settlers were killed in the area but the enemy was beaten off. In 1691, another Iroquois party was more successful and Fort Senneville was burned down; only the fortified stone windmill remained standing. An enraged Governor-General Frontenac ordered the immediate construction of another **Fort Senneville**, this time to be built of stone and made more imposing so as to discourage any future incursions. Work began in 1692. This new fort was a castle-like structure having stone, bastion-like, small elongated square towers at each corner of its square perimeter connected by thick stone walls. Obviously built to defeat hostile Iroquois incursions as well as to impress any other Indians, it also featured cannons and wall guns.

The new Fort Senneville guarded the western approaches to Montréal for many decades and was never attacked during the French Regime. Following the Great Peace of 1701 with the Indians, the northwestern area became much safer and, a few years later, Jacque Le Ber, the *seigneur* of Senneville, had his manor house built within the fort. In the following decades, its military importance decreased considerably. Nevertheless, a small detachment seems to have been posted at the fort right up to the end of the French Regime. The fortified windmill/watch tower was restored in 1700 and appears to have been in use until the 1780s. The fort itself was abandoned after 1760 but on May 25, 1776, it was occupied by American troops under the command of General Benedict Arnold. A small force of Canadians and Indians defeated the Americans further west at Cedars and, in their retreat, they set fire to whatever could be burned in the fort. As its defensive value was just about nil, their actions were "something of the aspect of vandalism," to quote Alexander D. Angus, the historian of Fort Senneville.

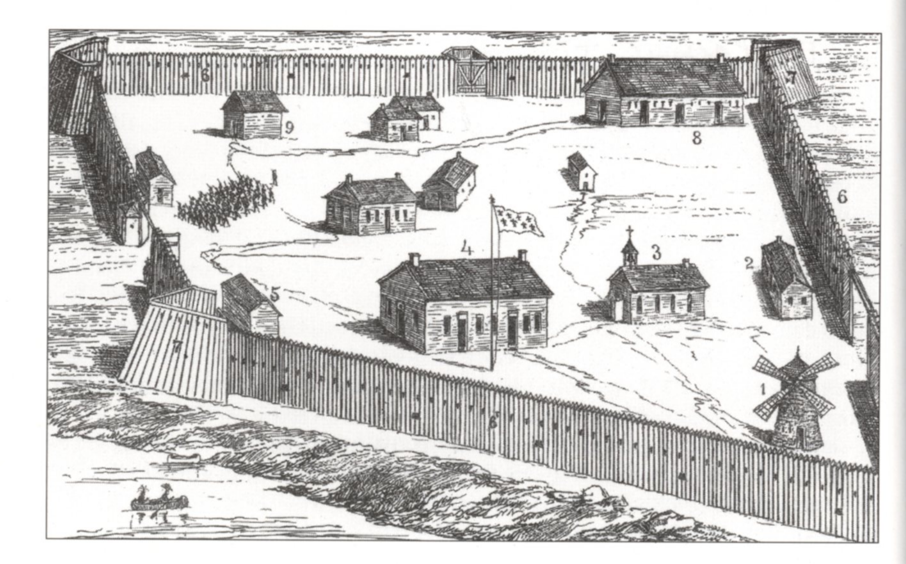
There were also small stockaded forts on the northern side of the island of Montréal, bordering the Rivière-des-Prairies. Heading east from Fort Senneville, one came successively upon **Fort Sainte-Geneviève**, **Fort Nouvelle Lorette** (or **du Sault-aux-Récollets**) made of stone, **Fort de la Rivière-des-Prairies**, the fort



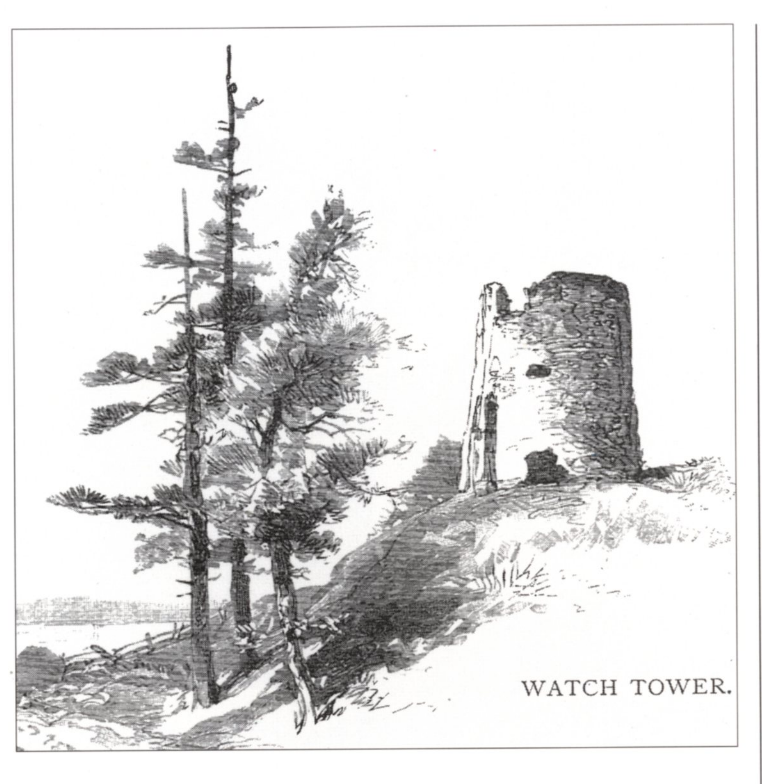
The two southern turrets of the Sulpicians' "Fort de la Montagne" are still extant in what is now downtown Montréal, although the walls and original buildings have long since vanished. (Print after a c.1920 painting by Paul Caron)

at the tip of **Ile Jésus** and **Fort Côte Saint-Jean** (or **des Roches**) at the eastern end of the island. Not far from the eastern end, on its southern side was **Le Petit Fort Gervais** with another fort on nearby **Sainte-Thérèse** island; then, heading west, **Fort Pointe-aux-Trembles**, **Fort de la Longue-Pointe** and **Fort Sainte-Marie** just before arriving at Montréal. In the 18th century, these smaller forts were used as lookout stations and had no regular garrisons, but they would be manned and maintained by local militiamen as there was always a village nearby.

Montréal also had a number of outlying stockaded forts on the south shore of the St. Lawrence River. Approaching Montréal from the east on the river, one would see, after the mouth of the Richelieu River at Sorel, **Fort Contrecoeur** and **Fort Verchères**, **Fort Varennes** built in 1693, **Fort Boucherville** built in 1668 and **Fort Le Tremblay**. At Longueuil, just across the river from Montréal, stood a remarkable structure, the combined château and fort of the Le Moyne family. This was **Fort Longueuil**, built between 1695 and 1698 by Charles Le Moyne, scion of one of the most powerful and wealthy families in New France. It consisted of a large stone wall rectangle measuring some 226 x 153 feet with, at each corner, a turret about 18 feet in diameter. The height of each wall is unknown but they were at least two storeys high and 3 to $3^{1}/_{2}$ feet thick. Within the rectangle was a fine manor house of about 76 x 25 feet, a chapel of about 48 x 23 feet, a stable for 12 horses and 40 cattle, a barn, a dairy and a few other dependencies. It was, according to Governor-General Frontenac, very similar to the "fortified châteaux in France" within one of the finest *seigneuries* in Canada. Indeed, a pleased Louis XIV ennobled Charles Le Moyne as first baron of Longueuil in 1700. Besides numerous servants, a small detachment of troops was based at the fort in the early 1700s, but they were withdrawn thereafter until 1755–60, when some of General Montcalm's metropolitan regiments were quartered in the area.



Fort Lachine (also called Fort Rémy), built from 1671, was typical of the log palisade forts erected to protect settlements around Montréal. It featured a windmill (1), a priest's house (2), a chapel (3), the house of Jean Millot which had previously been that of explorer Robert Cavelier de La Salle (4), a barn (5), palisades (6), bastions (7), barracks (8) and a powder magazine (9). (Reconstruction from a plan by G. de Catalogne; print from Girouard, *Le vieux Lachine*, 1889)



The remains of the fortified windmill and watch tower at Fort Senneville as seen in the 1870s. (*Picturesque Canada*...1882)

Further west, just across from the town of Montréal, was **Fort Saint-Lambert** and then **Fort Laprairie**. The latter originated in a settlement founded around 1670. Because of the increasing frequency of Iroquois raids, a stockade was built around the village in 1684, making a large irregular enclosure with two bastions at the river shore. The wisdom of this measure was highlighted on August 11, 1691, when a raiding party of some 300 Iroquois and New York militiamen led by Major Peter Schuyler attacked the fort. They were repulsed after having caused substantial losses to the defenders and destroying everything they could outside the fort. Relatively content and feeling they had nothing to fear, Schuyler and his men started back toward Albany. But the alarm had been raised and some 700 French troops and Canadian militiamen caught up with them. The ensuing battle was disastrous for Schuyler, who lost 83 killed (including 17 Indians) besides the wounded, while the French only had five or six wounded. The incident showed that, while the forts could not guarantee total safety for the settlers, they did provide protection for those within while the alarm system could muster a sizeable relief force fairly quickly. Iroquois warriors continued to lurk near the French settlements, but in decreasing numbers, while New York militiamen preferred to stay home.

Further west was **Fort Sault-Saint-Louis**, a mission reserve of Iroquois who had been converted to Christianity by French missionaries. Initially situated at the site of Laprairie in 1667, the reserve moved several times until it settled on the shore of the great Sault-Saint-Louis rapids in 1689. In 1724, a guardhouse and a house to lodge the garrison were built. At first a stockade fort, it was rebuilt in stone around 1729 but only half-finished on its southern and western sides as the Indians objected to stone walls facing their adjacent town just a few yards east of the fort. This Indian town was also protected by a bastioned stockade.

Following Queen Anne's War, many of the wooden forts around Montréal decayed. The inhabitants rebuilt them in stone during 1729–30, under the direction of Sub-Engineer de La Morandière who was following orders from the governor-general. As was the case previously, these forts were mainly intended to provide nearby inhabitants with a refuge against attacks by Indians. For the most part, the forts were very simple affairs consisting of a square stone-walled structure laid out by de La Morandière, probably pierced with loopholes. Such forts had no regular troops and would be manned by militiamen in an emergency. The forts with detachments of regular soldiers were more substantial and had bastions and artillery. By the mid-18th century, only Fort Senneville, Fort Sault-Saint-Louis and Fort Laprairie had small detachments of regular soldiers of the *Compagnies franches de la Marine*.

The ruins of one of Fort Senneville's castle-like corner turrets as they appeared in the 1890s, some 200 years after the fort's construction. This was Montréal's strongest outlying fort. (B. Sulte, *Histoire de la milice canadienne-française*, 1897)



Fort Nouvelle-Lorette in the 1690s. This was one of the village forts on the northern shore of the island of Montréal and it featured turrets. It housed missionaries for an Indian mission between 1696 and 1721. (Sketch in C.P. Beaubien, *Le Saut-aux-Récollet*, Montréal, 1898)

The 1760 capitulation

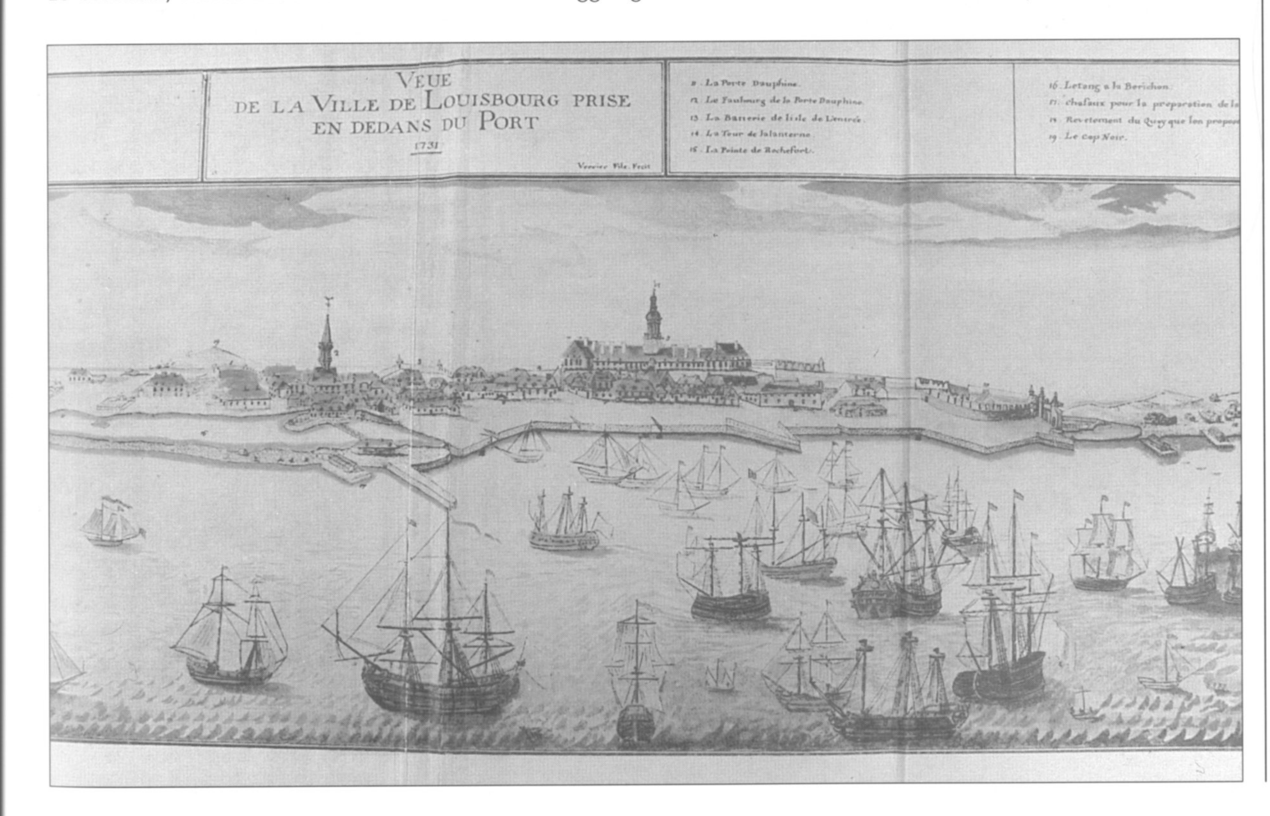
Many more troops were in and around Montréal from 1755 but, by the late summer of 1760, it was clear that the city (and its outlying forts) was doomed as three British armies converged on it. In early September, some 17,000 British and American provincial troops under the command of General Jeffery Amherst surrounded Montréal. Inside, General Lévis and his 3,000 men knew that any further resistance was futile, especially as Amherst had siege artillery at his disposal. In spite of the French regiment's gallant fighting record in the last five years, Amherst refused to grant them the honors of war so they could march out with drums beating, their colors flying and holding their muskets. Mortified and angered by Amherst's pettiness, General Lévis and many of his officers and men gathered together that night, reputedly on Sainte-Hélène Island. There, the old and glorious battle-worn silk colors were brought around a fire, held high for all to see, and then slowly lowered into the flames. It is said that many a French soldier and Canadian militiaman angrily broke his musket that night. The next day, September 8, 1760, the troops lined up in Montréal's Place d'Armes and the last French army in Canada surrendered.

Louisbourg

During the 17th century, France also had two small colonies on the Atlantic Coast: Acadia, which was essentially in the western part of present-day Nova Scotia with outposts in New Brunswick and the American state of Maine; and the harbor of Placentia in Newfoundland. The Treaty of Utrecht, signed by Britain and France in 1713, conceded Acadia (which confirmed it as Nova Scotia) and Newfoundland to Britain. France, however, kept Cape Breton Island and Isle Saint-Jean (the future Prince Edward Island). That year, French colonists arrived at Isle Royale, as Cape Breton Island was now known. In 1719, one of the island's best harbors was selected to become a fortress and naval base called Louisbourg. It was inaugurated in 1720 and, for the next 23 years, a town rose surrounded by substantial fortifications. It has often been told how Louis XV had once remarked, when presented with more bills to pay for Louisbourg's construction, that he expected to see its spires from Versailles! The story is, no doubt, apocryphal. In fact, it cost only a small part of France's vast recurring expenses for works on dozens of other fortresses at the time. Indeed, Louisbourg never even had a real citadel.

Building Louisbourg was nevertheless an expensive undertaking largely due to its remote location. However, it was a commercial success. It provided French Grand Banks fishermen with a secure harbor; their activities, which had been ruined during Queen Anne's War, were totally redressed by 1718 and expanded thereafter. Louisbourg's harbor also became the scene of intense maritime traffic from France, Canada and the West Indies; and from Britain's 13 colonies, which included a fair amount of smuggling.

A view of Louisbourg in 1731. Just over a decade after its foundation, the town had flourished and achieved the general appearance it would keep until July 1758. (Print after Verrier)





Louisbourg 1745

1: Dauphin Demi-bastion
This structure was mounted with heavy guns intended to protect the town's port as well as to provide crossfire with the Royal Battery on any enemy ship that might get this far upriver. It would also provide crossfire with guns on the landward side in conjunction with the guns in the King's Bastion. Its basic flaw was that it did not have sufficient firepower to cover the landward side.

2: King's Bastion
This was the military headquarters and "citadel" of Louisbourg. Its large building, the longest in North America at the time, housed the governor's residence, the Saint-Louis chapel that served as the town's main church, and the barracks of the garrison. While each flank had emplacements for six guns, the front of the bastion remained without artillery emplacements. It was thought, mistakenly as it turned out, that the marshes and swamps beyond would deter any attackers.

3: Engineer's house
The King's Engineer was one of the most important officials in Louisbourg, especially during its construction, and he had a large house that also served as an office.

4: Artillery storehouse
The heavy naval guns, gun carriages and other artillery equipment for the fortress and for warships were kept in this building.

5: King's storehouse
The *magasin du Roi* was a warehouse in which government supplies of all sorts were kept.

6: Residence of the Commissaire-Ordonnateur
The senior civil official in the colony lived here. Charged with responsibility for the finances and the administration of justice.

7: Queen's Bastion
8: Princess Bastion
9: Brouillan Bastion
10: Maurepas Bastion
11: Hospital
12: Piece de la Grave

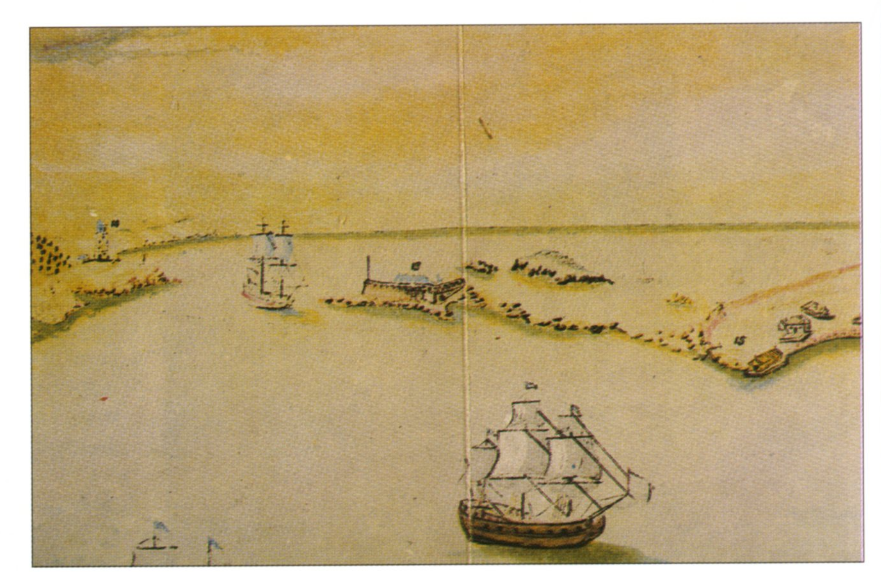
A plan of the Island Battery, built between 1726 and 1731. As its name implies, it was built on a small island at the harbor's entrance and featured 39 cannons of 24-pounder caliber. It was also equipped with mortars. (Archives Nationales, DFC)

Building the fortress

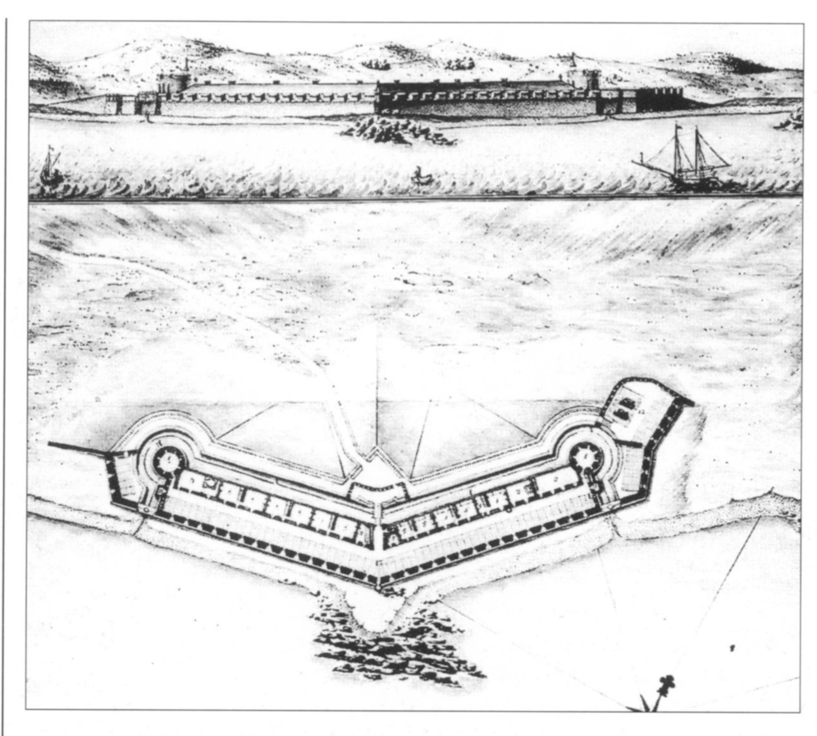
The designs of Louisbourg's fortifications were the most "European" of the fortresses built in New France. Marshal Vauban's manuals were practically transposed on the relatively flat and low-lying site of Louisbourg. The ramparts and bastions were finished with ravelins, redans, glacis, etc., very much as they would have been in a fortress in Flanders. Indeed, some of the cut stone came from the Rochefort area in France, shipped as ballast on vessels heading for Isle Royale. (Along with Brest and Toulon, Rochefort was one of the main naval bases of 18th-century France. Its built heritage has largely been preserved and displays remarkable similarities with the structures built in Louisbourg.)

In 1719, construction started on the King's Bastion, the foundation stone of which was officially laid in 1720, and which was completed in 1726–27. This bastion was the largest in the town and was meant to act as a small citadel as it was the only one featuring a covered way and glacis facing in toward the town as well as out and away from it. Inside this bastion stood the longest building in North America, the left (or east) wing of which contained the governor's residence and the Saint-Louis chapel while the right (or west) wing consisted of soldiers' barracks.

Between 1728 and 1730, the Dauphin Demi-bastion with its gate and powder magazine were built. Work went on from 1731 on the La Reine (Queen's) and Princesse (Princess) bastions. In 1737, construction work started on the Brouillan, Maurepas and Pièce de la Grave bastions facing Rochefort Point to the east. The Pièce de la Grave area also featured a wall that was mounted with guns, edging the water and extending toward the harbor.



Louisbourg's harbor entrance in 1731. The Island Battery is at the center with the tip of Rochefort Point to the right. (Print after Verrier)



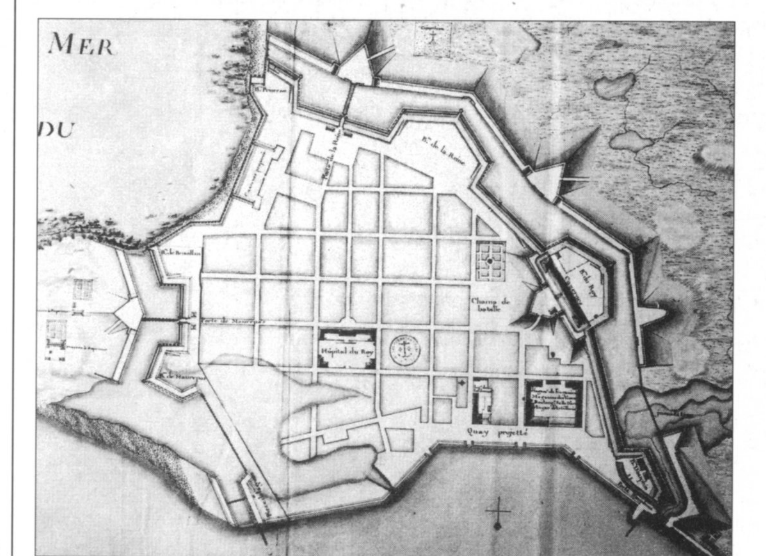
ABOVE A plan of the Royal Battery built between 1724 and 1732 at the far end of Louisbourg Harbor. It had some 40 embrasures for heavy 36-pounder guns as well as a dozen 6-pounders on its turrets. It was the strongest of Louisbourg's batteries up to 1745 and was designed to pulverize any enemy ship that succeeded in getting into the harbor. (Archives Nationales, DFC)

In 1743, the ramparts, bastions and glacis enclosing the town were reported as having been completed.

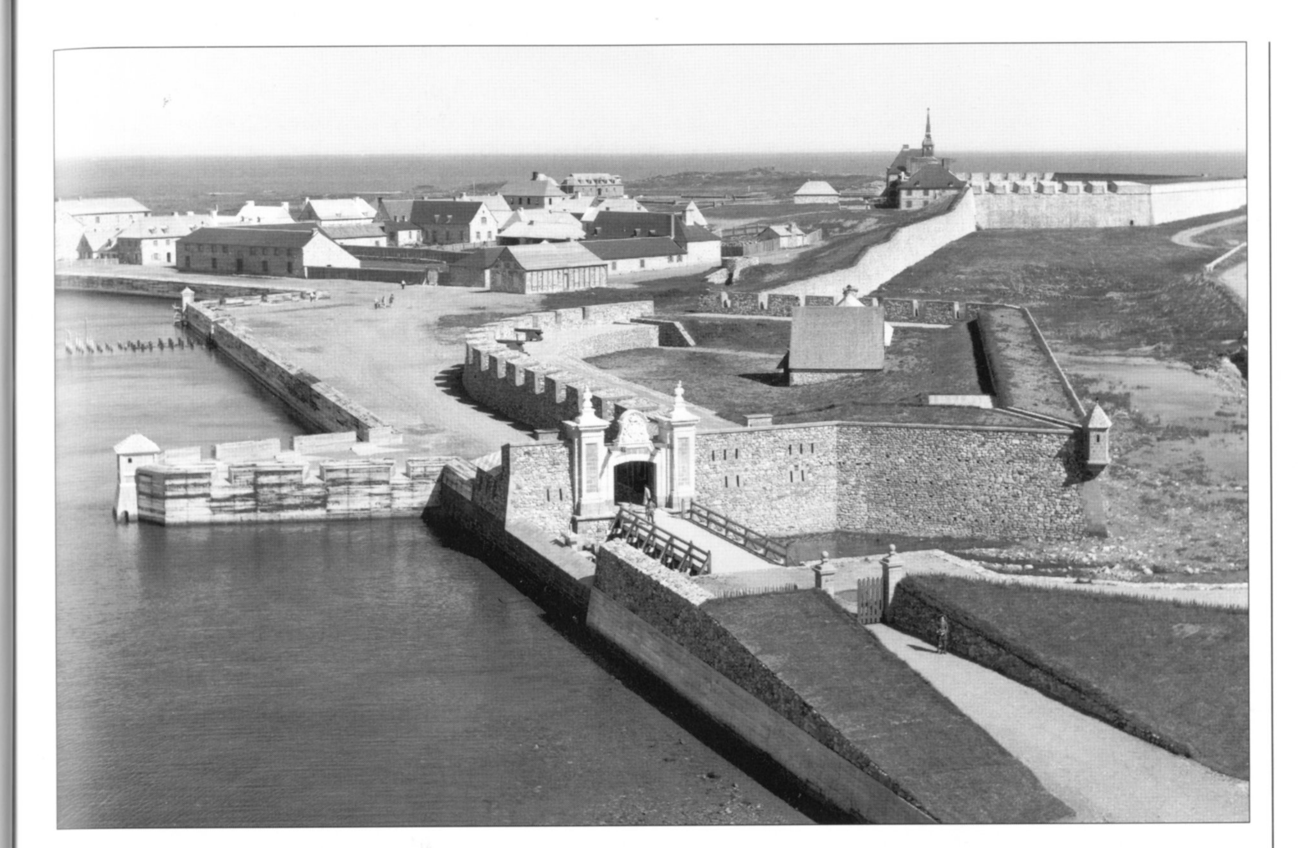
Batteries were also built outside the town to provide protection for the harbor. The most imposing was the Royal Battery, built between 1724 and 1732 at the far end of the harbor. It had some 40 embrasures for heavy 36-pounder guns as well as a dozen 6-pounders on its turrets. The Island Battery, built between 1726 and 1731, was, as its name implies, located on a small island at the harbor's entrance. Following modifications made in 1734, this battery featured 39 cannons of 24-pounder caliber. When joined in crossfire with the guns of the Dauphin Demi-bastion, it was reckoned that any enemy ship entering the harbor had only the slimmest chance of surviving the onslaught.

The 1745 siege

By the 1740s, the town had grown to about 4,000 inhabitants and had become the fourth busiest harbor in North America. Merchants and officials in American ports were worried by its success. When war broke out between Britain and France in 1744, New Englanders were quite concerned about the French fortress to the north and consequently some 4,000 volunteers attacked it with the help of the Royal Navy. The 1745 siege revealed the vulnerability of the outer batteries. The Royal Battery proved utterly useless and, worse, a menace to the town itself. Having poor landward defenses, it was abandoned without a fight to the New Englanders, who used its guns to bombard the town. The New Englanders' attack on the Island Battery was a costly failure but this battery was also at a disadvantage, being dominated by the heights of Lighthouse Point; the attackers built a battery there and bombarded the Island Battery until it surrendered.



With the fall of its outer batteries, the town was doomed and it duly capitulated on June 17, 1745. The population was deported to France and Britain immediately posted a strong regular garrison at Louisbourg. France wanted Louisbourg back and, in 1746, sent out a fleet under the Duke d'Anville carrying five battalions and a train of siege artillery. The expedition was beset by misfortune and dispersed by a hurricane. D'Anville and many men subsequently died of sickness and the remnants of the fleet limped back to France. Meanwhile, once in possession of Louisbourg, the British sought to repair and improve its works. Wooden barracks were built in the Queen's Bastion. Most



Louisbourg, reconstructed as it looked in 1744–45. During the 1960s and 1970s, part of the fortress was rebuilt as a heritage site. The town's main battery, the Dauphin Demi-bastion, is in the foreground with the Dauphin gate. (Parks Canada)

notably, the Dauphin Demi-bastion was strengthened by directing its main firepower out of the ramparts rather than into the harbor and adding a cavalier on the battery, thus creating two superimposed rows of cannon emplacements.

Returned to French possession

Under the terms of the Treaty of Aix-la-Chapelle signed in 1748, Louisbourg was returned to France. Needless to say, the New Englanders were quite upset about Britain's view that Madras in India was more important than the menacing fortress just to the north of them. Back in French possession in 1749, the fortress looked formidable but was in fact in poor condition. By the early 1750s, its fortifications had many defects. The masonry was crumbling and needed repair. The engineers' efforts were generally ineffective as a great deal of money—far more than the French treasury was willing to spend—was needed to put things right. To be truly safe, the Royal Battery required the addition of major defenses on its landward side. A strong fort needed to be built on Lighthouse Point to fully secure the harbor's entrance and prevent the Island Battery from being bombarded from that high point. The town's ramparts and bastions needed counterguards, ravelins and demi-lunes. Most of all, if it was going to be a truly powerful fortress that could repulse a major besieging force, Louisbourg needed a large citadel. Such a project seemed so hopeless, insofar as official approval in Versailles was concerned that engineers in Louisbourg did not even propose detailed plans because they knew that they would be rejected.

The French government's emphasis was on rebuilding trade and commerce and, within a few years, Louisbourg was flourishing again with a population of about 4,500. Nevertheless, some improvements were made in the Queen's Bastion with a demi-lune built there from 1754. A battery was also built at Rochefort Point. Overall, however, the town's defenses had not been improved significantly by the time war broke out again in 1756, nor would they be two

OPPOSITE A plan of Louisbourg in 1741. Most of the construction work had been completed by that date except at the Pièce de la Grave (lower left). (Archives Nationales, DFC)



Louisbourg 1758

The main features of Louisbourg during its second siege in 1758 were broadly similar to those in 1745 (see page 46). The walls and buildings were much the same except for improvements in the Dauphin Demi-bastion, which had been rebuilt with a cavalier so as to cover the land side with artillery fire.

Despite the spirited counter-fire by the French gunners, the relentless bombardment of the fortress by General Amherst's and Admiral Boscawen's gunners had inflicted heavy damage on the fortifications by the last week of July 1758. By July 24–25, the top of the cavalier and the walls of the Dauphin Demi-bastion and the King's Bastion had been reduced to rubble; part of the King's Bastion and the barracks in the Queen's Bastion were burning, as were some houses in the town.

Even more critical was the breach in the curtain wall between the Dauphin Demi-bastion and the King's Bastion. This gave the British the option of attempting an assault into the town. In spite of its partially filled moat (see foreground), storming the town via this large breach had every chance of success. The consequences of such assaults were costly in lives for both sides and likely meant a dire fate for the civilians at the hands of enemy soldiers half-crazed from the fighting. When fortresses reached the point of being partly destroyed and breached, further fighting was considered useless and negotiations leading to surrender were held. This is what happened at Louisbourg, which surrendered on July 26, after its walls had been breached.

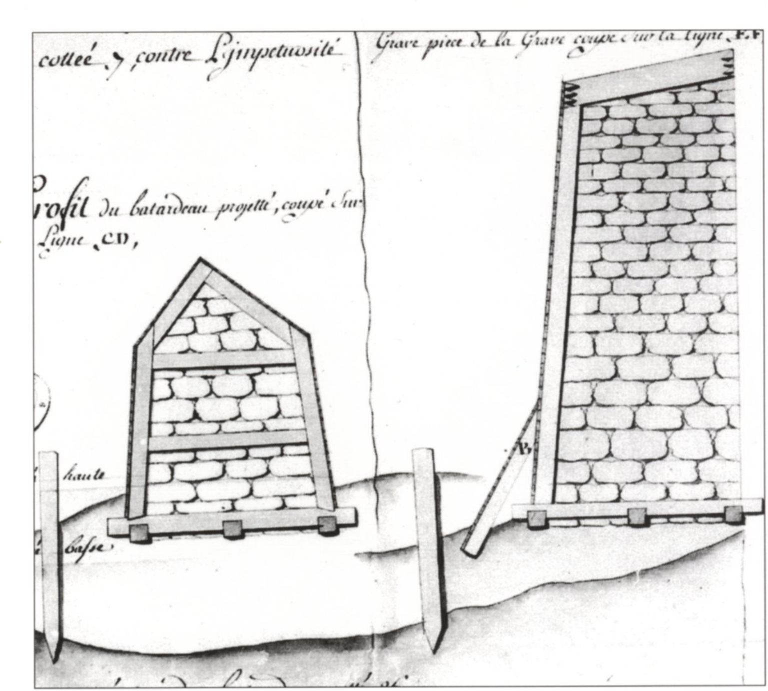
years later when a large British fleet carrying over 10,000 troops led by Sir Jeffery Amherst was sighted off Louisbourg.

Less expensive but necessary work that had been done concerned building field fortifications at the most likely landing site for an enemy army. The shores around Louisbourg were very rocky and the only real landing beach nearby was at La Comorandière (later renamed Kennington Cove). This was where the New Englanders had landed in 1745. In 1757, parapets and fascines were positioned on the beach at La Comorandière. A trench behind the parapets and fascines ran the length of the site, punctuated by the occasional battery of 6-pounders and swivel guns.

The 1758 siege

Rough weather and the field fortifications at Kennington Cove initially caused difficulties for the British when they tried to land troops on June 8, 1758. Brigadier James Wolfe managed to land with his men, rush up a cliff and outflank the defenders, who retreated into town. The second siege of Louisbourg was a hard-fought affair lasting seven weeks. Outnumbered, the French garrison put up an outstanding fight to delay the British as much as possible so that it would be too late for them to go on and attack Québec. This time, the French rendered the Royal Battery largely useless before the siege, but General Amherst had plenty of guns and pioneers to build his own powerful siege batteries. As a fort had not been built on Lighthouse Point, the British again built a battery there that battled for days with the French colonial artillery gunners in the Island Battery below. Finally, on July 26, after a breach had been made near the Dauphin Demi-bastion, the much-battered fortress surrendered.

Although the fortifications were badly damaged and the town partly in ruins as a result of the bombardments, there was still a chance that it might be rendered a viable fortress again with some determined repairs. In Britain as in New England, many worried that Louisbourg might be recaptured by the French or, as in 1748, returned to France at the end of the war. The menace simply had to be removed. Thus, in February 1760, it was "His Majesty's orders and Mr. Pitt's" that "all the Fortifications, Works and Deffences whatever shall be totally demolished and Razed." Colonel Bastide, Royal Engineers, who had supervised the 1758 siege operations, was put in charge of the demolition work. A Company of Miners, especially raised in England for the purpose, arrived in May and started blowing up the defenses. The summer was spent destroying all the walls, batteries and bastions. By late fall, the town's fortifications had been reduced to piles of rubble. Some of the better-quarried stones were taken to Halifax, Nova Scotia, to be used in buildings erected there. With the demolition work complete, Colonel Bastide and the Company of Miners sailed back to England in January 1761. Louisbourg was a fortress no more. Thereafter, small detachments of regulars were posted there until 1768 when its small garrison was withdrawn and what remained of the town's site was eventually abandoned.

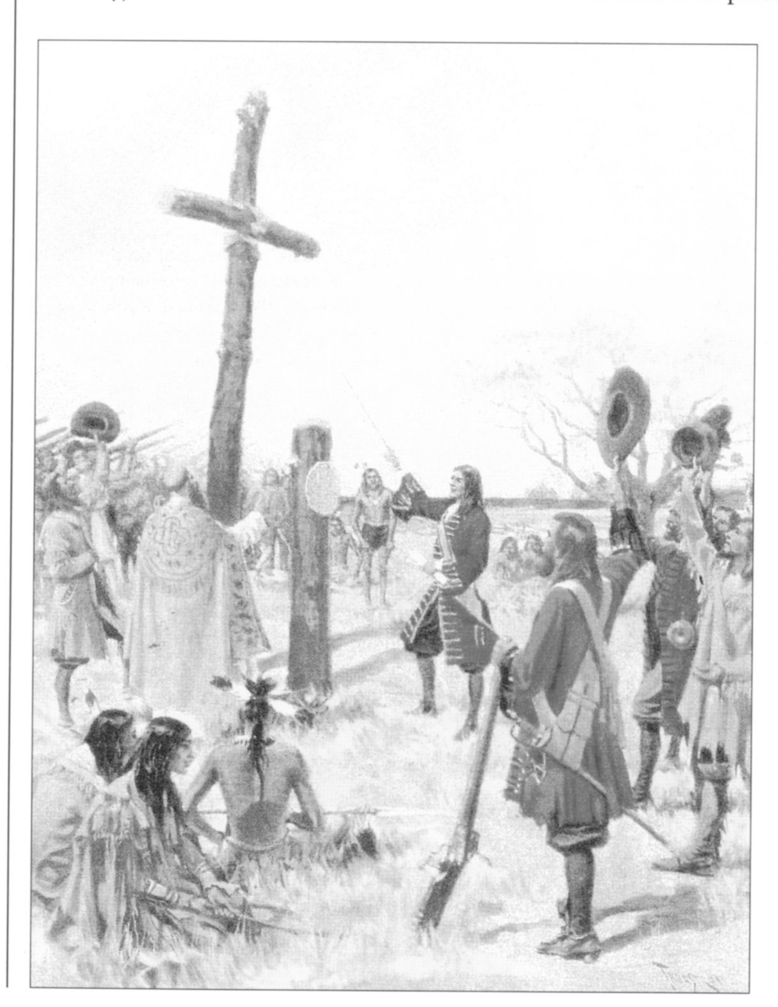


Louisbourg's harbor walls were covered with heavy wood planking as shown in this 1752 plan. (Archives Nationales, DFC)

New Orleans

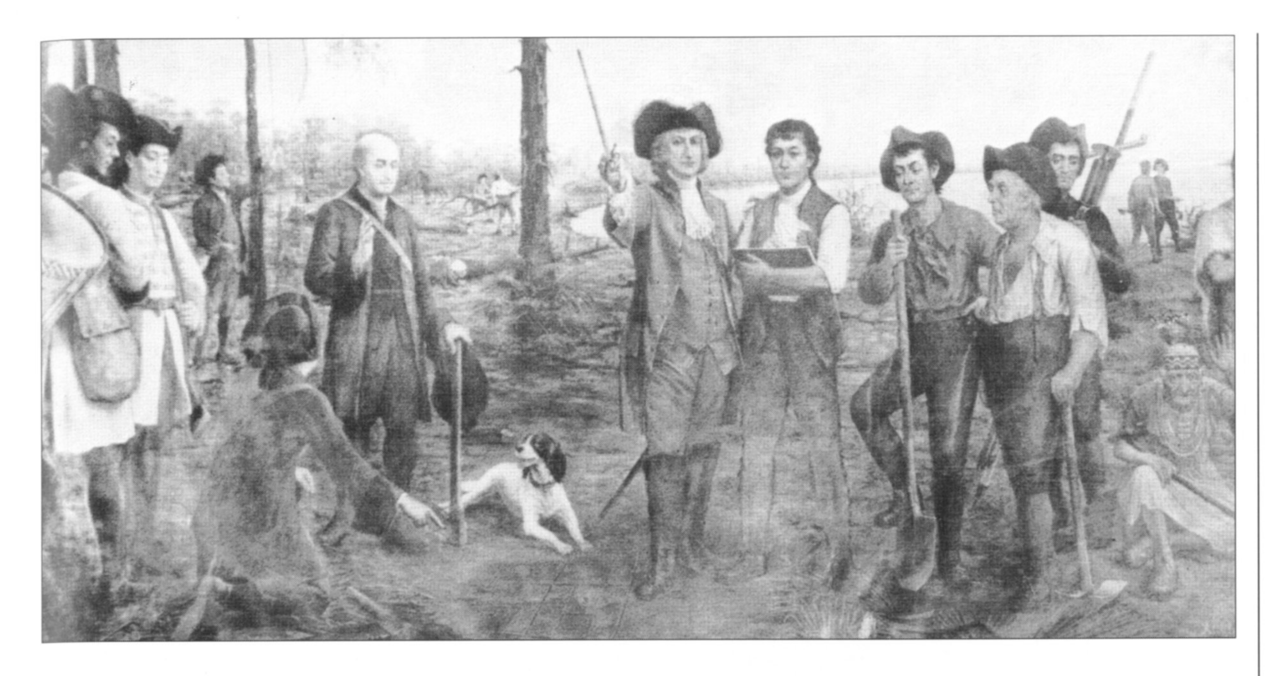
The city of New Orleans was the capital of the huge but sparsely settled French colony of Louisiana. Now reduced to a small-sized American state, Louisiana's original area was enormous, covering the whole of the American Midwest to the Canadian border and the territories bordering the Gulf of Mexico from Texas to Florida. France ceded Louisiana to Spain and Britain in 1763, Britain getting the land east of the Mississippi River and Spain getting the lion's share including New Orleans, territories bordering the Gulf of Mexico and all land west of the Mississippi. However, Spanish troops only replaced the small French garrison in 1769. The new Republic of the United States of America took over Britain's territory in 1783 while Spain, keeping only the present-day Gulf states of Mississippi and Alabama, returned all the rest of Louisiana to France by secret treaty in 1800 that was made public in 1802. Thus, once again for a short while, New Orleans was the capital of French Louisiana. It was in New Orleans, on December 20, 1803, at the Place d'Armes (now Jackson Square), first laid out in 1722, that the official transfer of Louisiana from France to the United States of America took place. (For more details on events, personalities and Spanish and French troops, including uniforms and artillery, during 1803, see René Chartrand, "Napoleonic Louisiana 1803," *Military Collector & Historian: Journal of the Company of Military Historians*, Winter 2000.)

Robert Cavelier de La Salle and his exploration party formally take possession of Louisiana in the name of King Louis XIV in 1682 upon reaching the Gulf of Mexico. (Print after a c.1900 painting by T. de Thulstrup)



France's claim originated in 1682 when explorer Robert Cavelier de La Salle traveled down the Mississippi River and planted a cross with the arms of King Louis XIV, claiming the whole area for France when he reached the Gulf of Mexico. He named the area Louisiane after the Louis XIV. After a failed attempt by La Salle to establish a settlement in 1685, the French were back in 1699 under the command of Pierre Le Moyne d'Iberville and his brother Jean-Baptiste Le Moyne de Bienville. They established permanent settlements at Biloxi and Mobile further east (in the present-day states of Mississippi and Alabama).

From 1719, a wave of wild speculation on the settlement of Louisiana swept France and several thousand settlers, many seeking gold and diamonds, flowed in. Once in the Biloxi area, at the unhealthy site of Nouveau Biloxi (New Biloxi), many succumbed to tropical diseases at a very alarming rate and, by May 1721, some 900 settlers had reportedly died. Another settlement at the mouth of the Mississippi River had been planned in



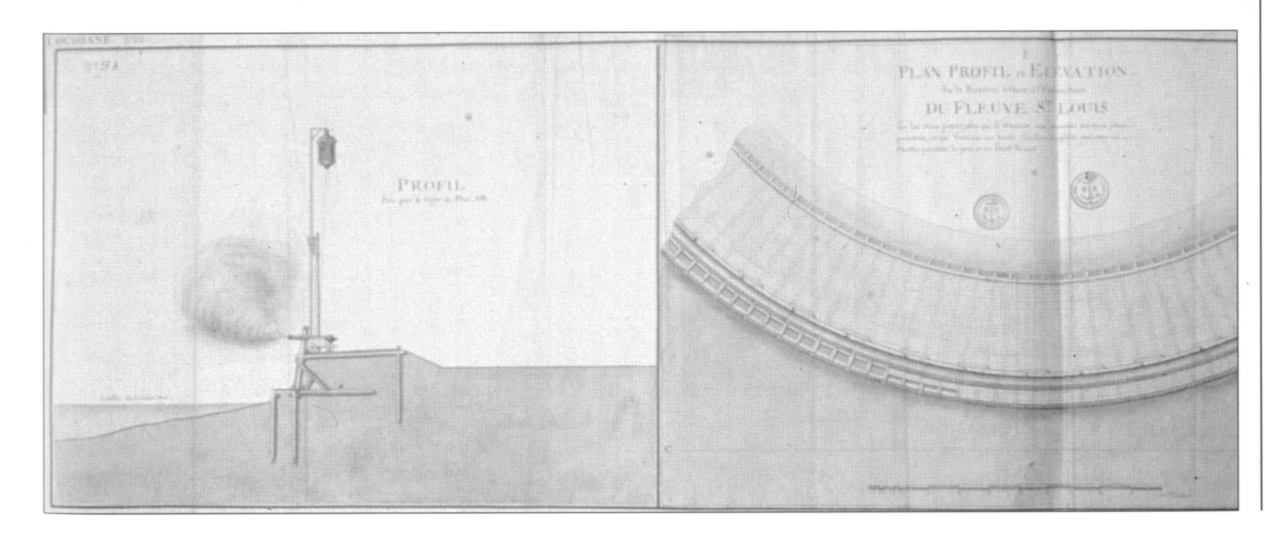
Governor Jean-Baptiste Le Moyne de Bienville founding New Orleans in August 1722. (Print after a c.1920s painting by A. Alaux)

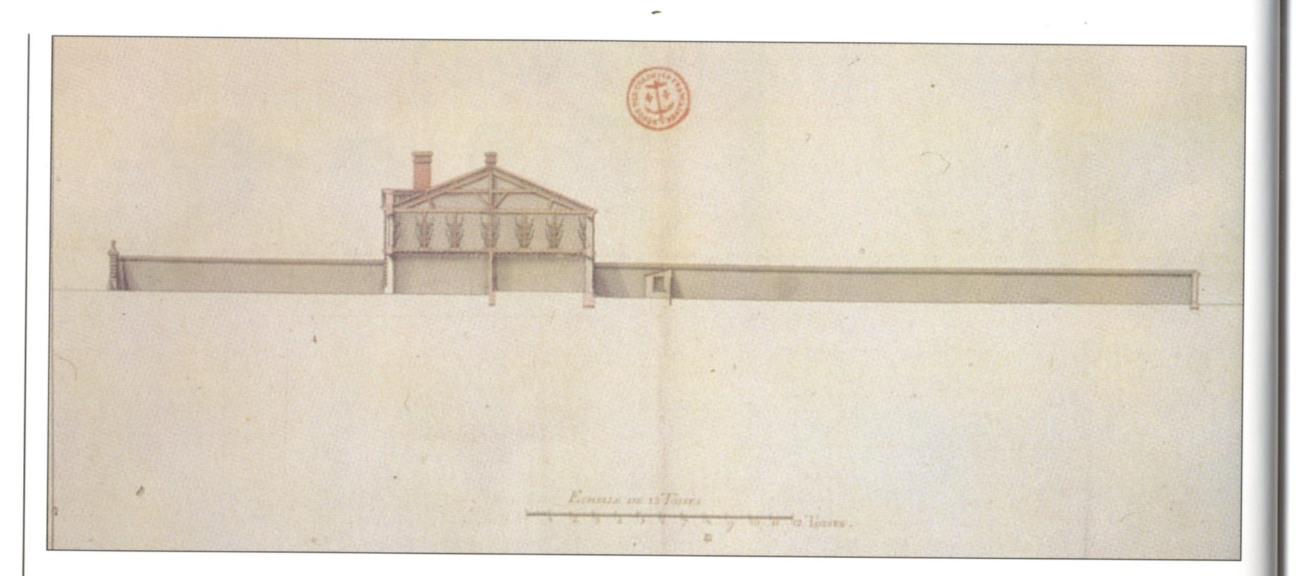
1719 and concerned colonial authorities rushed an engineer to the spot to lay out a plan for the town. The new town was to be called Nouvelle-Orléans (New Orleans), named after the Duke of Orléans, who was regent of France while King Louis XV was still a child. In August 1722, Governor Bienville moved the capital of Louisiana from Biloxi to New Orleans, having just received approval for the move from France. The new capital was about 100 miles north of the Mississippi River Delta, where the Mississippi enters the Gulf of Mexico and the open sea.

Outlying forts and batteries

New Orleans, somewhat like Montréal, depended on a number of outlying forts and batteries that were critical to its security. Work on a fortified post started in early 1722 at **La Balise**, a low-lying island of mud, sand and pine trees at the point where the Mississippi River flows into the Gulf of Mexico. This post was really a shore battery to check the progress of any ship heading up the river. Vessels coming into the Mississippi would stop there to confirm their identity and take a pilot before heading further upriver. Construction work continued

A plan of a semicircular artillery battery at La Balise, 1722. This post was at the entrance of the Mississippi River (still called "Fleuve St. Louis" on the plan) on the Gulf of Mexico. Any ship going up the river to New Orleans would stop there. It was the first of several outlying forts on the river before reaching the city. Note the mast with the large lantern to guide ships at night. (Archives Nationales, DFC, Louisiane)



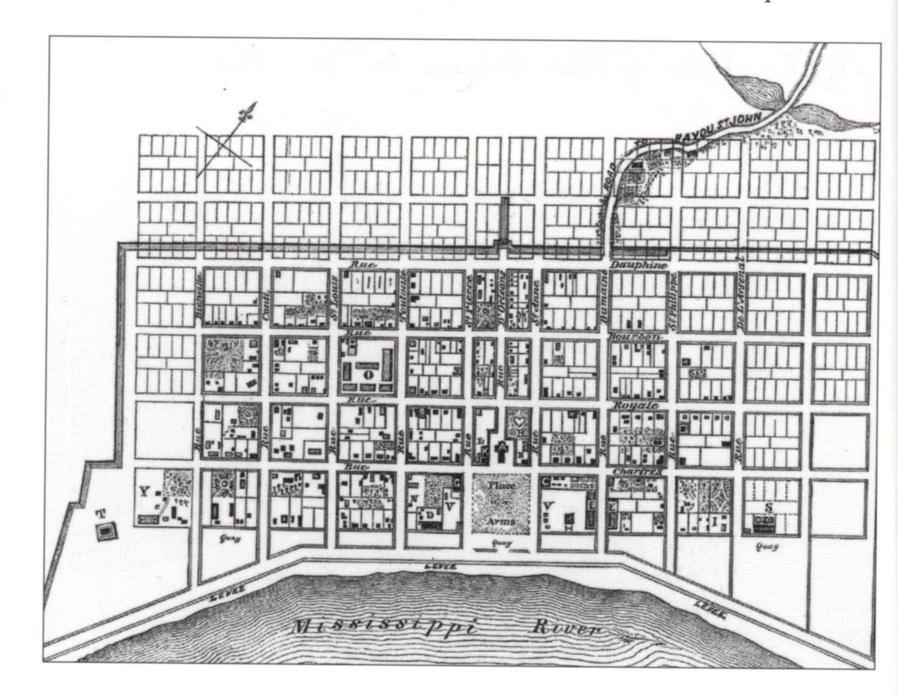


A plan of the barracks of New Orleans dated March 30, 1729. This side view shows the musket racks. (Archives Nationales, DFC, Louisiane)

intermittently for decades thereafter. There were two batteries with barracks for the detachment of troops, a powder magazine built on pilings to keep it dry, and a protective palisade on the landward side.

As elsewhere on the Mississippi, the great floods of the mighty river with its strong current played havoc with such shore fortifications. Except for the two batteries, which were higher up, the land was often flooded when there were high winds. By 1746, La Balise was too silted up and most of its garrison moved to Détour à l'Anglois. Captain Bossu's impression of the place in 1752 was that it was "isolated and surrounded by swamps filled with snakes and alligators." Indeed, La Balise had practically been washed away by the end of the French Regime. British Captain Philip Pittman saw little more than the barracks there in the mid-1760s.

From September 1766, the Spanish administration built a pilot station slightly to the north on higher ground. In 1803, when French colonial prefect Pierre de Laussat saw the pilot station, he noted that it featured "quarters for



A plan of New Orleans, c.1730–31, by which time the town was being enclosed for the first time by a narrow ditch with a palisade and a small earthen wall. The powder magazine ("T") is shown to the lower left. (Print after a c.1730–31 plan in Cable, *The Creoles of Louisiana*, 1885)



The guardhouse of the New Orleans garrison originally built facing the Place d'Armes (the present-day Jackson Square). This 1970s exhibit re-created the guardhouse's appearance in the mid-18th century although the French soldiers' uniforms should have been gray-white faced with blue rather than blue faced with red. The floors and walls are from the original structure and are the only vestiges left from the French military works. In the late 1790s, the guardhouse was incorporated into the much larger Cabildo government house built by the Spanish and reoccupied briefly by French Napoleonic administrators in 1803. It is now the main location of the Louisiana State Museum. (Author's photograph)

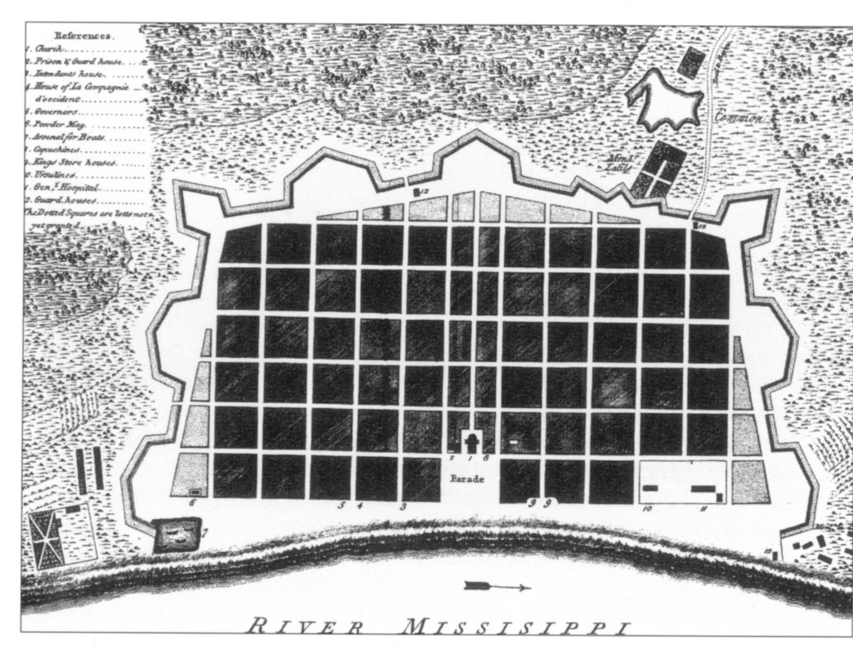
sixteen student pilots, the customs house; barracks for the soldiers and officers [one sub-lieutenant and ten men of the Luisiana Regiment at the time]; and a guardhouse." There was also a tower "constructed of grating and lattice work to cut out the wind" about 45 feet high "with a spire in the form of a steeple, atop of which a flag was raised. One can see it out on the ocean five leagues [10 miles] away." All that remained on the site of the abandoned French fort were "orange groves, orchards, and the ruins of the arsenal." During December 1803, the French *tricolor* replaced the Spanish flag on the tower and, in turn, was replaced by the American Stars and Stripes from January 1804.

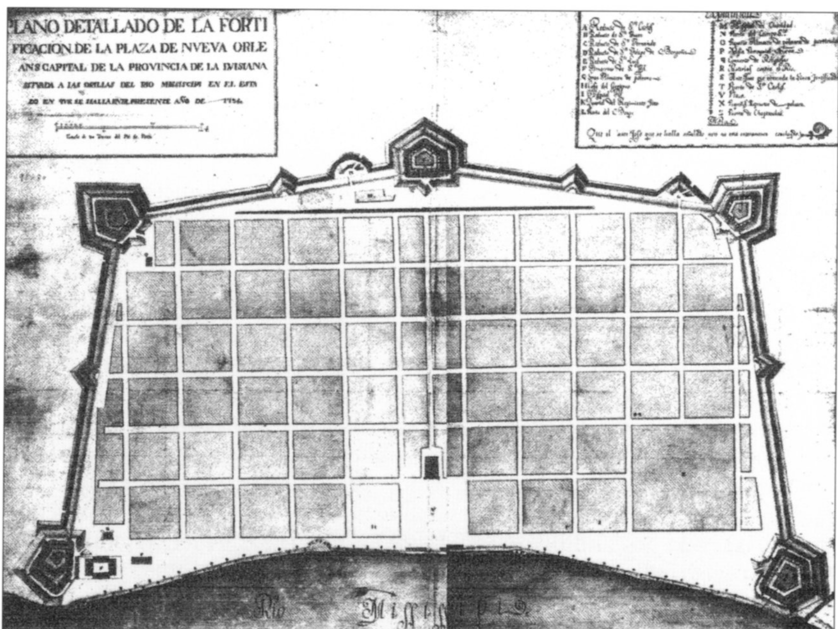
As La Balise was so vulnerable to being ruined by the forces of nature, other fortifications were erected at **Détour à l'Anglois** (English Turn) at a bend on the Mississippi about 17 miles south of New Orleans in 1746–47. These fortifications would provide the main defenses against ships coming upriver from the south. Two forts were built, one on each side of the river at this bend, which were "enclosures of stockade and defences against small arms" on the land side and batteries facing the river. According to Captain Pittman, each battery was mounted by ten 12-pounders, which was "more than sufficient to stop the progress of any vessel." The garrison was much stronger at Détour à l'Anglois with 56 men there against only 18 at La Balise in 1752. The Spanish succeeded the French until the 1790s when Détour à l'Anglois was abandoned in favor of the new Fort San Felipe and Fort Bourbon at Plaquemines.

The French and the Spanish had realized that additional fortifications were necessary south of New Orleans. As early as 1767, plans were made for the construction of a small fort on the river about 60 miles south of New Orleans at **Plaquemines.** Twenty years later, plans were drawn up to build a substantial fort that could pulverize ships at Plaquemines and, in 1790, construction started on Fort St. Philip (or San Felipe), with the smaller adjoining Fort Bourbon across the river. In 1803, when the French retook possession, Fort St. Philip had 18 iron guns and Fort Bourbon had a garrison of about 100 men and "several iron cannons that crossfired" with those across the river.

Ramparts and batteries

New Orleans, capital of Louisiana from 1722, was laid out on low-lying flat land in a rectangular plan with city blocks but without, initially, fortifications. Thought was nevertheless given to the matter of defense. A plan of 1724 outlined a suggested wall with bastions but nothing was done until 1729 when the uprising of the Natchez Indians and the fall of Fort Rosalie (Natchez), where nearly all the French perished, spread much fear among the inhabitants of defenseless New Orleans. Governor Périer at once ordered that a palisade and a moat be built to enclose the town. By 1731–32, the ditch and earth wall then being built enclosed most of the town. However, the northeast side remained open except for a moat. The Natchez did not move to attack New Orleans and





TOP A plan of New Orleans showing the new pentagon-shaped walls with bastions built to enclose the city in 1759. (Map from Pittman, *The Present State...*, 1770)

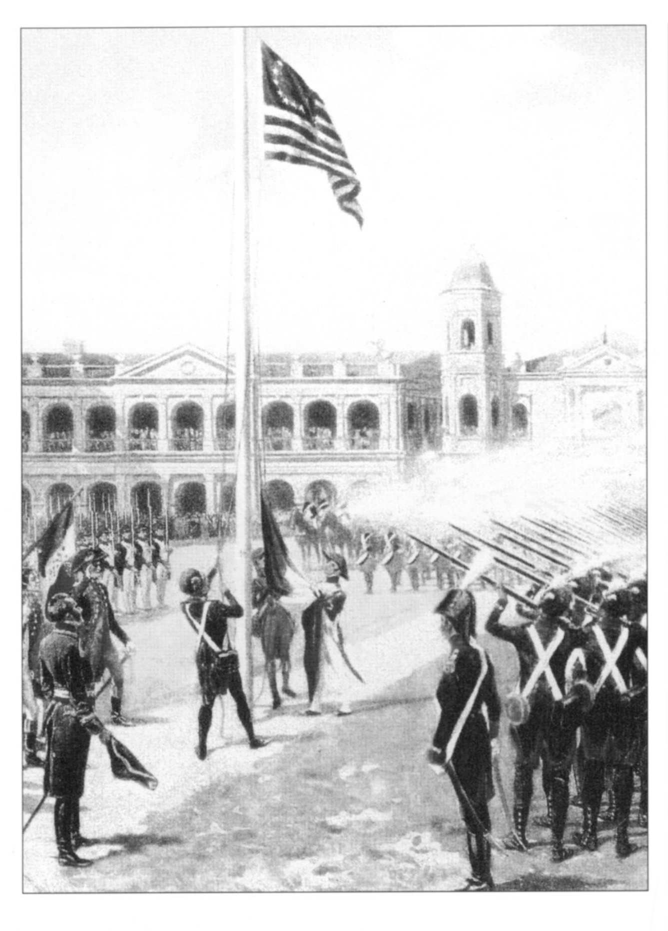
BOTTOM A plan of New Orleans in 1794 showing the rebuilt walls and added redoubts erected in 1793–94. (Servicio Historico Militar, Madrid)

were defeated in the field, with the result that the sense of urgency concerning matters of defense lessened. There was thus less interest in finishing the work, especially as settlers complained they had too few slaves to do this government work as well as till their plantations for crops. Another factor was the Mississippi River itself which, when it rose, as it often did, washed its silt and sand into the moat. Thus, Governor Bienville reported, in May 1733, that the moat, planned to be 60 feet wide, had a mere 2 feet of width.

There was also a lack of funds for fortifications as other military structures had to take priority. Louisiana had come directly under the government's administration since 1731 and the garrison had been increased from eight to 13 companies of colonial infantry. Up until then, the soldiers were lodged in "barracks" made of wooden "stakes planted in the ground, roofed with bad tree bark, ready to collapse, without flooring, without chimneys" and which were thus very humid, reported Chief Engineer Broutin (AC, C13A, 16). With such poor housing, the soldiers frequently became ill. It thus became crucial to have a proper barrack building, which was built from 1734 with various finishing touches being added until 1743. This large building, consisting of a wide main block to house the NCOs and men with pavilions at each end for the Officers' Quarters, was erected on the western side of the Place d'Armes. The site of the barrack building is now occupied by the notable Pontalba buildings constructed in 1850.

Another important work was the powder magazine in a large bastion-shaped area at the southwest angle near the river. The original magazine was built of framed squared timbers filled in with bricks and mortar and surrounded by a log palisade. Chief Engineer Broutin had a new magazine made of brick, which featured elegant corner turrets to replace the rotting logs, the whole structure being designed to look like a small fort. It also featured a gate decorated with the royal arms in wrought iron. It was constructed this way, he explained to the minister of the navy, to impress the Indians and to reassure the inhabitants that, in the event of an attack, the women and children of New Orleans could find refuge within its walls. In effect, the powder magazine doubled as a small citadel. It was completed in early 1736.

Insofar as the walls surrounding New Orleans were concerned, little seems to have been done during the following decades despite calls from time to time to improve the fortifications. The city, although it had some military works such as the fortified powder magazine and the barracks, remained just about defenseless. Its only salvation was its fairly large garrison. As late as 1755, it was not thought necessary to have fortifications to protect the city. However, with the outbreak of the Seven Years War in 1756, opinions began to change as news of the war went from bad to worse. By 1759, Governor Louis de Kerlérec was getting worried about New Orleans's safety and had the existing fortifications repaired. This work, although denounced as expensive by Commissary Rochemore, only consisted of erecting a palisade and digging a ditch around the city. It was insufficient. In the event of an attack by Indians or the British, such works could not offer much protection.



The ceremony marking the transfer of Louisiana from France to the United States, New Orleans, December 20, 1803. This print after a c.1900 painting by T. de Thulstrup reconstructs fairly well the general scene that occurred on the Place d'Armes. In the background is the Cabildo government house built by the Spanish in 1795–99 and the St. Louis cathedral as it looked in 1803 before its spires were added. At right is what appears to be French Prefect Laussat. To his left, a few French officers, the one with the hand on his sword guard seemingly Battalion Chief Vinache, an engineer officer. The smaller figures standing to attention further back are likely meant to represent the Company of French Citizens. An American soldier is raising the Stars and Stripes while two figures in French uniforms are gathering the French *tricolor*. The Americans are uniformed according to plates by Henry Ogden published in 1888. (Print after a c.1900 painting by T. de Thulstrup)

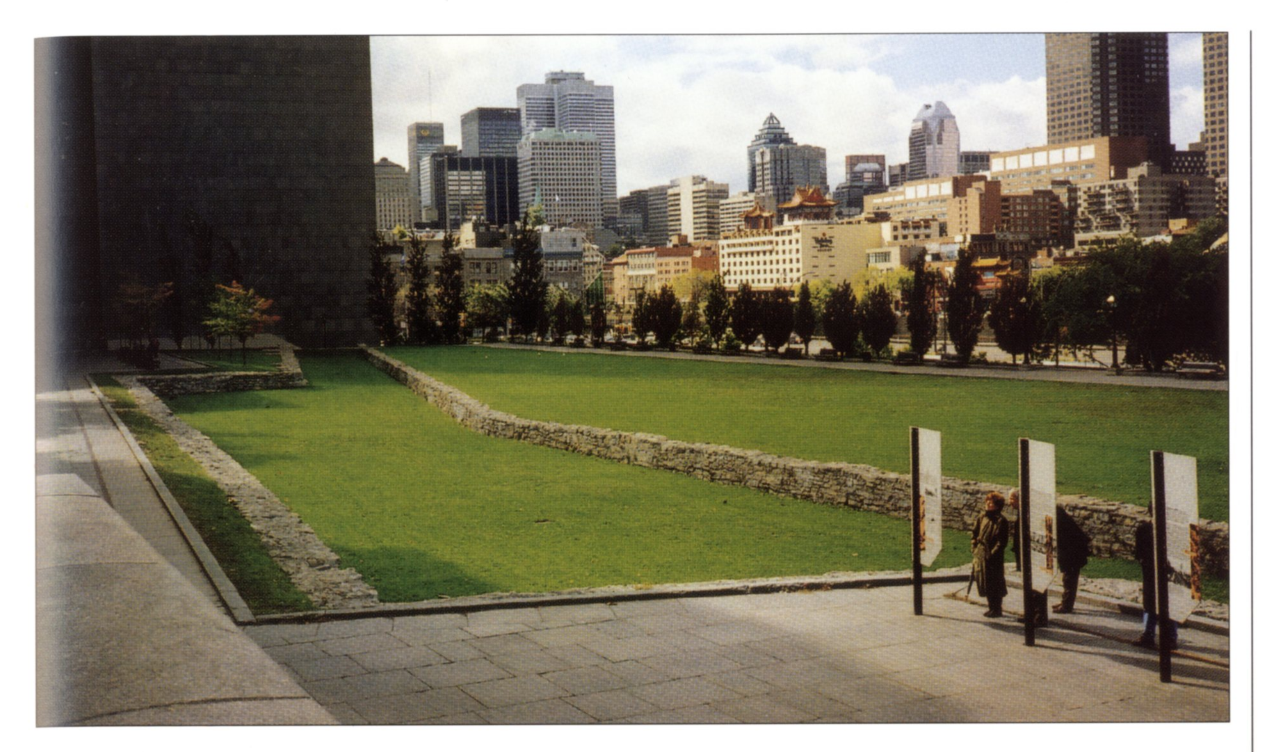
In March 1760, more bad news reached New Orleans regarding French defeats in Canada and elsewhere. The governor and his senior officers convened a War Council and resolved that New Orleans had to have fortifications erected immediately. The work started in April 1760. Slaves were drafted in to build the fortifications, head taxes on slaves were raised and government property was sold to pay for the new fortifications. News of the fall of Québec reached New Orleans only in August 1760, 11 months after the event, and must have added to the sense of urgency in building the fortifications. They were erected rapidly under the direction of Chief Engineer Vergès, who finished construction in mid-December 1760.

Although by no means a formidable fortress, New Orleans was at last surrounded by walls featuring six wide bastions and two smaller bastions. Instead of a rectangular plan as was the case previously, Vergès laid out the expanding city in a large pentagon. The wall itself was simply, as an official noted, a palisade with a small ditch. There were "two or three batteries" on the shore of the Mississippi River. The town had about 100 cannons mounted *en barbette* for lack of carriages. The highest-caliber guns were 24-pounders, all the guns no doubt being old naval iron artillery pieces. However, there was very little ammunition available. In January 1764, British Captain Philip Pittman saw a "stockade with a banquette and a very trifling ditch without; these can answer no end but against Indians, or Negroes, in the case of an insurrection." Facing the river, Pittman counted "twenty-one pieces of ordnance, *en barbette*." (These were only the guns at the riverside. There would have been others in the bastions and some more in store.)

The Spanish, who occupied the city from 1769, maintained the existing works until early 1792 when the Governor, Baron Carondelet, ordered that the walls of New Orleans be rebuilt. He was often to be seen on horseback with his suite of officers supervising the construction work. Gilbert Guillemard, major of the Luisiana Regiment and occasional engineer, designed the new fortifications. The work was undertaken from 1792 to 1794. The previous walls in the pentagon plan designed by Vergès were kept to enclose the city, but all the bastions were removed. The town's fortifications now featured five redoubts at the angles of the straight curtain walls and a large battery on the waterfront. Each redoubt also had the pentagon shape and was armed with artillery so as to provide crossfire on an attacking enemy. The two redoubts on the banks of the Mississippi River, St. Charles and St. Louis (San Carlos and San Luis), were both larger and stronger. They had 18-foot-thick parapets and ditches 8 feet deep by 20 feet wide. Their parapets' interiors were reveted with masonry, the outside with grass sod, and the scarp and counterscarp with boards. Inside were barracks capable of lodging 150 men. The three smaller redoubts on the land side, named San Juan, San Felipe de Borgoña and San Fernando by the Spanish, were connected by an earth rampart featuring a line of pickets in front of a ditch 7 feet deep by 40 feet wide. Great damage by hurricanes and floods, and a sense that the wall could not offer much protection, led to the fortifications being neglected and they eventually vanished in the early 19th century.



Québec lit up at night. Now a UNESCO World Heritage site, Québec is the only walled city in North America. (Author's photograph)



The foundations of Montréal's 18th-century ramparts toward the Saint-Laurent Bastion with part of the city's center as a backdrop. (Author's photograph)

With such modest fortifications, New Orleans could not be defined as a fortress in the usually accepted sense of the word in Europe, with extensive masonry-faced ramparts and glacis and citadels. Although this colonial town was far from being a strong position defensively, it was surrounded by a protective wall, partially from 1730 and completely from 1760, which was and remains the basic definition of a fortress. It was never put to the test of an attack but perhaps, in the low-lying and swampy terrain, its works were much more formidable than they seemed. When the British attacked New Orleans in January 1815, the defensive line built at Chalmette was similar in style to the old city walls: a ditch, a thick earthen rampart and some pickets. It was enough to provide New Orleans's defenders with one of the most outstanding triumphs in the history of the United States of America.

New Orleans had no outlying defenses to the north on the Mississippi River until 1748 when some Choctaw warriors attacked the village of the **Côte des Allemands** (German Coast), 40 miles to the north. Although troops sent from New Orleans subsequently defeated and routed the Choctaws, the attacks led some frightened settlers to depart, with the result that a small regular garrison was henceforth posted there. A fort was built consisting of a square palisade, with 35 yards of one side facing the Mississippi River. A timber and fill main building within served as officers' and men's barracks and as a guardhouse. The fort was abandoned in 1759.

The sites today

Following the cession of Canada to Britain and the American siege of 1775–76, Québec's fortifications were steadily improved and a large citadel was finally built in the 1820s, thus truly rendering it the "Gibraltar of North America." Three large forts were also built on the south shore in the 1860s. Following the withdrawal of the British garrison in 1871, there was pressure to demolish the walls and batteries. Thanks to the efforts of the heritage-conscious Lord Dufferin, governor-general of Canada in the 1870s, the ramparts were preserved and today, Québec is the only walled city in North America. The rampart that was erected is essentially the same that can be seen in present-day Québec. Since the end of the 19th century, Québec has become a favorite destination for tourists and great efforts have been made to preserve the heritage of this exceptional city. In 1985, UNESCO declared it a World Heritage Site.

After 1760, Montréal's walls seemed less relevant to a successful defense and more of an obstacle to businessmen as the city expanded rapidly, there being twice as many inhabitants outside its ramparts by the beginning of the 19th century. In 1801, legislation authorized the walls' demolition, which started in 1804 and continued until 1817, although most of it had been leveled by 1810. Montréal is now Canada's second largest city and one of the main business centers in the northeast of North America. In the last two decades, small parts of its ramparts' foundations have been rediscovered and preserved. The network of outlying forts also fell into ruin and disappeared except for a few stone vestiges.

At Louisbourg, what had once been a sizeable fortress was reduced to little more than a pile of rubble on an abandoned peninsula. Further back in the bay, a fishing village was established and carried on the name of Louisbourg. In the late 19th century, with the advent of a railroad, tourists started to visit the rather haunting and barren area strewn with evocative ruins. In time, it became a national historic site with a small museum. In 1961, over two centuries after the second siege, the Government of Canada ordered "The Fortress of Louisbourg is to be reconstructed partially so that future generations can thereby see and understand the role of the fortress as a hinge of History. The restoration is to be carried out so that the lessons of History can be animated." The reconstruction work was carried out over the next two decades. Incredibly, the fortress town of Louisbourg lives again today as it was in the mid-18th century!

New Orleans's earthen ramparts disappeared with the city's rapid growth following the cession of Louisiana to the United States. Thereafter, the Americans built strong outlying forts rather than trying to enclose its most important business city and port on the Gulf Coast. Nothing today hints that New Orleans's old and famous "French Quarter," with its many historic buildings and jazz halls, was once surrounded by ramparts.

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Glossary

abbatis A defensive barricade or row of obstructions made up of closely spaced felled trees, their tops toward the enemy, their branches trimmed to points and interlaced where possible.

banquette A continuous step or ledge at the interior base of a **parapet** on which defenders stood to direct musket fire over the top of the wall. A fire step.

barbette Said of cannons placed over a **rampart** without the protective **embrasures**.

bastion A projection in the **enceinte**, made up of four sides (two faces and two flanks), which better enabled a garrison to defend the ground adjacent to the main or **curtain** walls.

battery An emplacement for artillery.

breastwork See **parapet**.

casemate A mortar-bomb or shell-proof chamber located within the walls of defensive works; generally pierced with openings for weapons; **loopholes** for muskets or **embrasures** for cannon.

cavalier A raised construction, usually in a fortress, holding a second tier of guns in a **battery**.

citadel A strong fort within (or a part of) a larger fortification. No true citadels were built in New France.

cordon The coping or top course of a **scarp** or a **rampart**, sometimes of different-colored stone and set proud from the rest of the wall. The point where a **rampart** stops and a **parapet** starts.

counterguard A defensive work built in a **ditch** in front of a **bastion** to give it better protection.

covered way A depression, road or path in the outer edge of a fort's **moat** or **ditch**, generally protected from enemy fire by a **parapet**, at the foot of which might be a **banquette** enabling the coverage of the **glacis** with musketry.

cunette A furrow located in the bottom of a dry **ditch** for the purpose of drainage.

curtain The wall of a fort between two **bastions**.

demi-bastion A half-bastion with only one face and one flank.

demi-lune A triangular-shaped defensive work built in a **ditch** in front of a **bastion** or a **curtain** wall.

ditch A wide, deep trench around a defensive work. When filled with water it was termed a **moat** or wet ditch; otherwise a dry ditch or foss.

embrasure An opening in a wall or **parapet** allowing cannon to fire through it, the gunners remaining under cover. The sides of the embrasure were called cheeks, the bottom was the sole, the narrow part of the opening was the throat and the wide part was the splay.

en barbette An arrangement for cannon to be fired directly over the top of a low wall instead of through **embrasures**.

enfilade fire Fire directed from the flank or side of a body of troops, or along the length of a **ditch**, **parapet** or wall. Guns in the flank of a **bastion** can direct enfilade fire along the face of the **curtain**.

epaulement A **parapet** or work protecting against **enfilade fire**.

fascines Long bundles of sticks or small-diameter tree branches bound together for use in **revetments**, for stabilizing earthworks, filling ditches, etc.

fossé or foss See under **ditch**.

fraise A defense of closely placed stakes or logs, 6–8 feet long, driven or dug into the ground and sharpened; arranged to point horizontally or obliquely outward from a defensive position.

gabion A large, round, woven wicker cylinder intended to be set in place and filled with earth, sand or stones.

gallery An interior passageway or corridor that ran along the base of a fort's walls.

gate A main entrance of a fortress.

glacis A broad, gently sloped earthwork or natural slope in front of a fort, separated from the fort proper by a **ditch** and outworks and so arranged as to be swept with musket or cannon fire.

gorge The interval or space between the two curtain angles of a **bastion**. In a **ravelin**, the area formed by the flanked angle and either left open or enclosed.

guardhouse The headquarters for the daily guard.

guérite A small lookout watch tower, usually located on the upper outer corner of a **bastion**.

half bastion See **demi-bastion**.

hornwork A work made up of a **bastion** front; two **half-bastions** and a **curtain** and two long sides termed "branches." It functioned to enclose an area immediately adjacent to a fort or **citadel** and create another layer of defense. None were built in New France's fortresses.

loopholes Small openings in walls or **stockades** through which muskets were fired.

magazine A place for the storage of gunpowder, arms or goods generally related to ordnance.

merlon The solid feature between **embrasures** in a **parapet**.

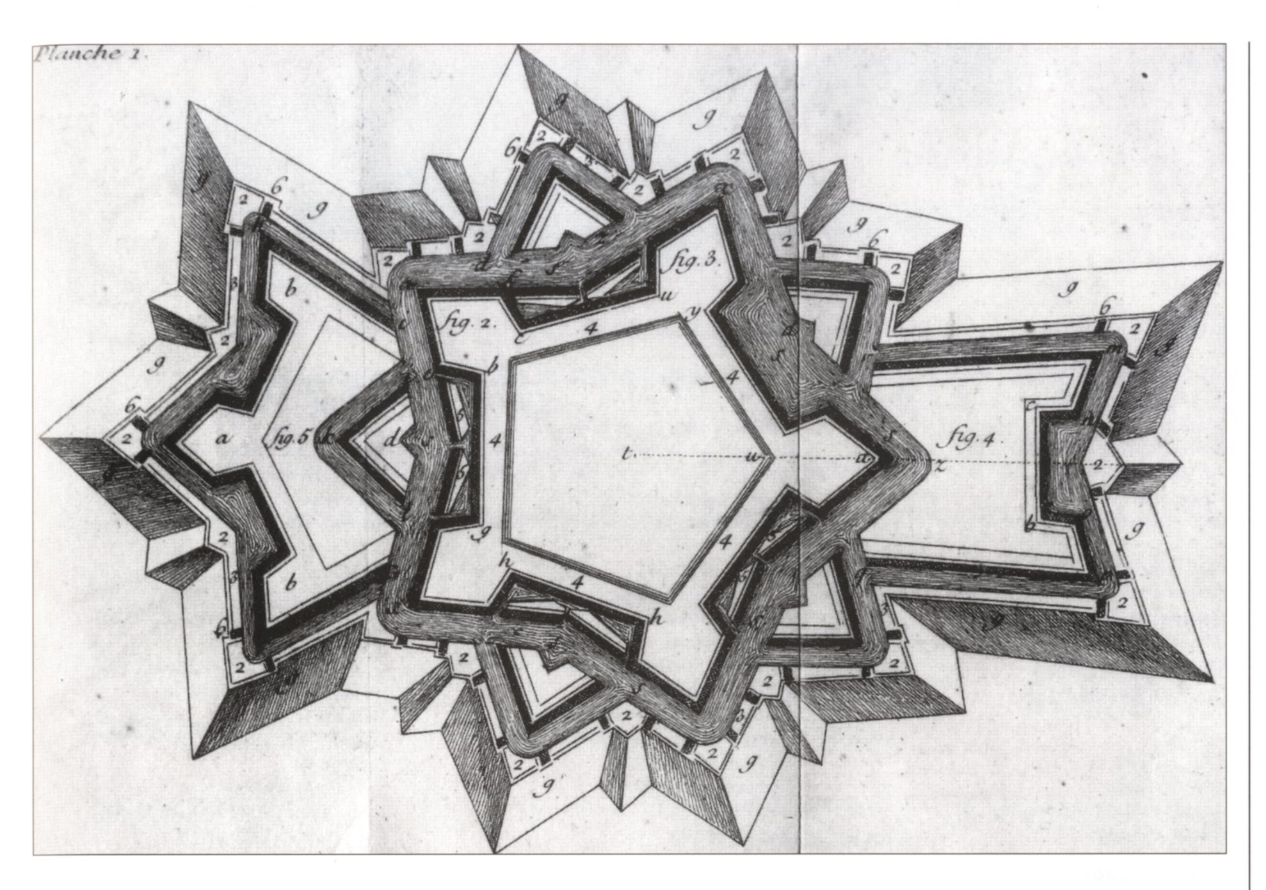
moat See **ditch**.

orgue See **portcullis**.

outwork An outer defense, inside the **glacis** but outside the body of the place. A **ravelin** is an outwork.

palisade A high fence made of stakes, poles, palings, or pickets, supported by rails and set endwise in the ground from six to nine inches apart. See **stockade**.

parapet A **breastwork** or protective wall over which defenders, standing on **banquettes**, fired their weapons. The parapet was usually built on top of the fort's **rampart**.



A fortifications plate from *Le petit dictionnaire du tems, pour l'intelligence des nouvelles de la guerre* (Paris, 1757). The letters and numbers on this theoretical plan refer to various fortification terms in the Glossary.

portcullis A timber or iron grating that can be lowered to close the gates of a fortress. Called *orgue* (organ) in French.

postern A passage leading from the interior of a fortification to the **ditch**.

rampart The mass of earth, usually faced with masonry, formed to protect an enclosed area. The main wall of a fortress.

ravelin An outwork consisting of two faces forming a salient angle at the front and a flank angle to the rear that was usually closed at the **gorge**. Ravelins were separated from the main body of the place by **ditches** and functioned to protect **curtains**.

redoubt An enclosed fortification without **bastions**.

revetment The sloping wall of stone or brick supporting the outer face of a **rampart**.

sallyport A passageway within the **rampart**, usually vaulted, leading from the interior of a fort to the exterior, primarily to provide for sorties.

sap A trench and **parapet** constructed by besiegers to protect their approaches toward a fortification.

scarp The interior side of a ditch or the outer slope of a **rampart**.

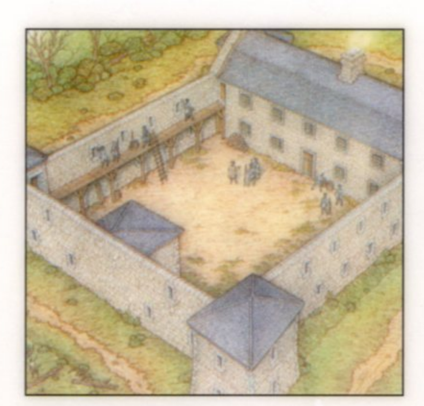
stockade A line or enclosure of logs or stakes set upright in the earth with no separation between them, to form a barrier eight or more feet high. Stockades were generally provided with **loopholes**. The loopholes were reached by **banquettes** or elevated walks. See also **palisades**.

traverse A **parapet** or wall thrown across a covered way, a terreplein, **ditch** or other location to prevent **enfilade fire** or reverse fire along a work.

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Following the discovery of America by Columbus in 1492, European colonists brought their system of fortification to the New World in an attempt to ensure their safety and consolidate their conquests. French and British explorers came later to North America, and thus the establishment of their sizeable permanent settlements only got under way during the 17th century. The inhabitants of New France built elaborate fortifications to protect their growing towns and cities, and this book provides a detailed examination of the defenses of four of them: the three largest fortified cities in Canada – Québec, Montréal and Louisbourg – and New Orleans in Louisiana.

ISBN 1-84176-714-X

